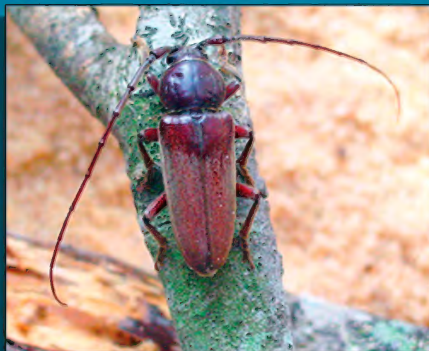


Illustrated Key

to the

Longhorned Woodboring Beetles of the Eastern United States

Lingafelter



Illustrated Key to the Longhorned Woodboring Beetles of the Eastern United States

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Front Cover Photos—top, *Strangalia strigosa* Newman [by Eugenio Nearns]; bottom left, *Romulus globosus* Knull [by Roy Morris]; bottom right, *Aegomorphus morrisii* (Uhler) [by Eugenio Nearns].

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Illustrated Key to the Longhorned Woodboring Beetles of the Eastern United States

by

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Abstract: A fully illustrated key with over 800 habitus and character photographs is presented to allow the easy identification of eastern U. S. Cerambycidae. Of the 400 species of Cerambycidae that occur east of the Rocky Mountains (but excluding southern and western Texas), 377 species are treated in the key. Only uncommonly collected or isolated taxa from the Great Plains, Great Lakes Region, or extreme upper New England are excluded. Nine invasive Cerambycidae known or suspected to be established in the eastern U. S. are also included in the key. The key includes 417 couplets that are arranged such that most taxa will key out in less than 20 couplets and 10 minutes. The key uses only easily seen external characters, never requires dissection, and never requires both sexes of a species to be available. It emphasizes ease of identification over constraining genera, tribes, or subfamilies to remain together. Unless otherwise specified, all nomenclature follows the latest checklist of Cerambycidae of the Western Hemisphere by Monné & Hovore (2006).

This illustrated key includes most of the Cerambycidae of the eastern United States (as defined in Yanega, 1996:11) with the exception of those species occurring only in the boreal forest (taiga) around the Great Lakes and extreme upper New England (Maine and northern portions of New Hampshire, Vermont, and New York) and a few other rarely collected species. This represents 377 of the 400 known species east of the Rocky Mountains but excluding southern and western Texas (about one-third of the United States fauna). Every currently known species in the Southeastern and mid-Atlantic United States (Tennessee, Kentucky, North Carolina, South Carolina, Virginia, West Virginia, Maryland, Delaware, Louisiana, Alabama, Mississippi, Georgia, and Florida) is included, and this key can be used with full confidence for those states. Given that many of the included taxa also occur in central USA and Canada, it will be useful for identifying 90% of those species that occur east of the Rocky Mountains, with the exception of southern and western Texas (see Fig. 1 for confidence intervals). The map indicates confidence intervals based on percentages of species

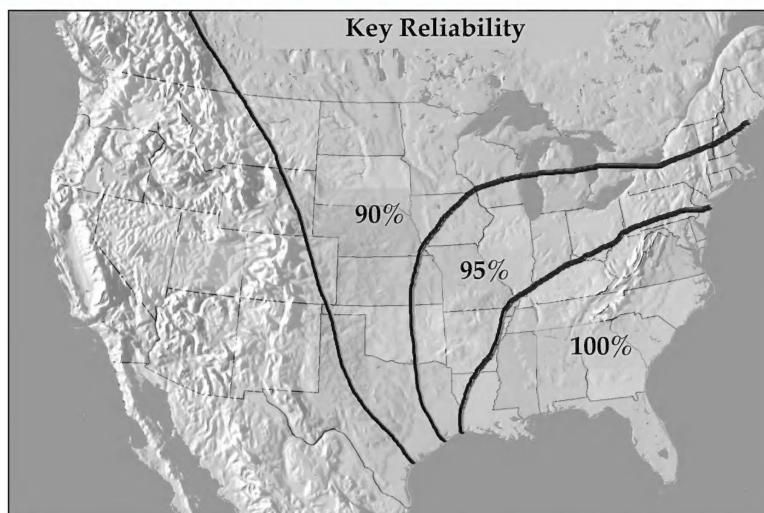


Figure 1. Confidence intervals reflecting percentage of species from given regions that are included in the key.

included and able to be identified for the given region, but the confidence intervals will actually be much higher if considering success based on specimens encountered for the given regions, since those species excluded are rare, isolated, and uncommonly encountered. The nine invasive species confirmed for the eastern United States are also included in the key. The key should not be used for identifying species from southern or western Texas, or the Rocky Mountains and localities west, as it will have a reliability of less than 50% for those regions.

The key was constructed in a practical way to facilitate identification without the need for dissection, without the need for having both sexes of a species available, and without the need for expert knowledge of morphology. It was produced by first generating a 10 drawer synoptic collection of about 1,500 specimens representing the 377 species covered. These species were sorted and subsorted based on easy to see characters wherever possible, and divided into equally sized subsets wherever possible. Using a digital automontage camera system, over 800 images were taken and enhanced in Photoshop® and these images of diagnostic characters accompany most couplets. After the key are short synopses and dorsal habitus photos for nearly every species. If I could maintain a natural grouping in the key, I did; however, subfamilies and tribes are not necessarily treated together as they are in the Cerambycidae of North America monograph series (Linsley and Chemsak, 1961-1995). That was a monumental work, but since taxa were constrained to key together even if some characters did not support that, users of the keys were often frustrated by wrong turns. There are many instances in that work where a tribal or genus character is unreliable later when keying one of its included species. As examples of how I have avoided that situation: the aberrant asemine, *Atimia*, fits with the Cerambycinae based on external features that do not require dissection (the shape of the palpi); the unusual *Necydalis*, likewise, is removed from the other lepturine genera because of its unusual morphology (short frons and gena). In many cases, characters can reasonably be interpreted in different ways (or may be expressed differently among several specimens). Where I determined this was the case, I have the species occurring in two (or more) places in the key. For example, *Romulus globosus* Knull may or may not have spines on the antennae. Therefore, it keys with its elaphidiine congeners and elsewhere in the key. Several acanthocinine genera have pronotal tubercles that could reasonably be interpreted as acute or rounded, so they are treated in both sections of the key beyond that couplet. About 50 species occur at least twice in the key to account for the occasional character that could be interpreted in two ways, or is simply variable within species, so the user is not penalized for making a “wrong” turn.

For identifying eastern United States Cerambycidae, Yanega’s 1996 field guide to Northeastern Longhorned Beetles is an excellent resource. Users of this key may wonder why they should bother keying anything out since Doug Yanega prepared the field guide with illustrations of all northeastern species. First, this key covers all the species in the southeast U. S. which were not covered in Yanega (1996). Second, when running through a key that has considered all species in a given region and accounted for morphological variation within species, the user gains a certainty after the identification process that is absent from comparing to pictures and perhaps glossing over some important character details. Yanega (1996) does include a few of the rare or isolated taxa that occur in extreme upper New England or the Great Lakes region that are not included in this key, so it remains an indispensable resource. Third, this is the only key that includes known invasive North American Cerambycidae as well as native species. Given the onslaught of invasive organisms, their economic cost, having a resource that facilitates their identification is highly beneficial to all of us. As a final justification for this key: You will get a definitive name on each specimen from the Midatlantic or southeast United States in 10 minutes or less, nearly every time. No other resource will enable this speed and certainty with identifications.

I have included a general morphological atlas (Figure 2) that defines the structures used in the key, along with some other general anatomical features of Cerambycidae. By no means should you memorize these structures, as many of them are clearly shown in the hundreds of automontage photographs that follow throughout the key. It merely serves as a reference figure. Note that the figures in the key are not numbered, but their number is inferred and referred to as the couplet number immediately above the figure. To avoid unnecessary duplication, in some cases a figure is needed in several couplets and the user may be instructed to refer to an earlier appearance of that figure.

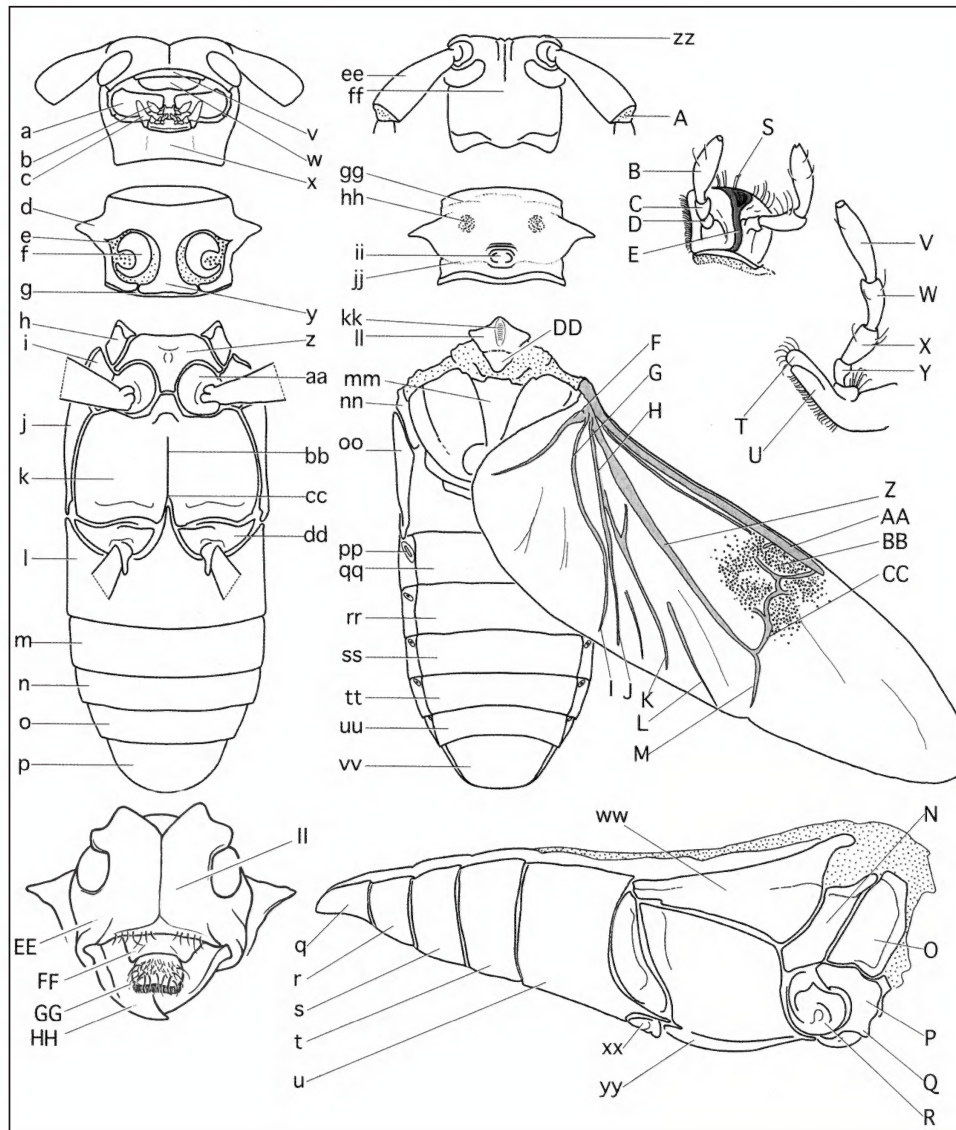


Figure 2. Morphological atlas of a generalized cerambycid. a, mandible; b, labium; c, maxilla; d, lateral pronotal tubercle; e, lateral (external) procoxal cavity; f, procoxa; g, posterior procoxal margin (closed); h, mesepisternum; i, mesepimeron; j, metepisternum; k, metasternum; l, ventrite 1; m, ventrite 2; n, ventrite 3; o, ventrite 4; p-q, ventrite 5; r, ventrite 4; s, ventrite 3; t, ventrite 2; u, ventrite 1; v, clypeus; w, labrum; x, gular region; y, prosternal intercoxal process; z, mesosternum; aa, mesocoxa; bb, metasternal sulcus; cc, metasternal intercoxal apex; dd, metacoxa; ee, scape (first antennomere); ff, vertex of head; gg, anterior constriction of pronotum; hh, anterolateral patch (sometimes patch of hairs, punctures, or raised callus at this position); ii, posteromedial pronotal callus; jj, posterior pronotal constriction; kk, stridulatory region of mesonotum; ll, mesonotum (attached to mesoprescutum or scutellum); mm, metanotum; nn, mesepimeron; oo, metepisternum; pp, first abdominal spiracle; qq, tergite 2; rr, tergite 3; ss, tergite 4; tt, tergite 5; uu, tergite 6; vv, tergite 7; ww, metepisternum; xx, metacoxa; yy, metasternum; zz, antennal tubercle; A, scape cicatrix; B, apical labial palpomere (palpomere 4); C, penultimate labial palpomere (palpomere 3); D, palpomere 2; E, labial ridge or crest; F, AP vein; G, AA vein; H, CuA vein; I, AA3+4 vein; J, CuA3+4 vein; K, MP4 vein; L, MP3 vein; M, Medial Spur vein; N, mesepimeron; O, mesepisternum; P, mesosternum; Q, mesosternal process or tubercle; R, mesocoxa; S, marginal (apical) setae of labium; T, galea; U, lacinia; V, apical maxillary palpomere (palpomere 5); W, penultimate maxillary palpomere (palpomere 4); X, maxillary palpomere 3; Y, maxillary palpomere 2; Z, MP vein; AA, RA vein; BB, Radial Cell; CC, RP-MP vein; DD, scutellum; EE, gena; FF, clypeus; GG, labrum; HH, mandible; II, frons.

Acknowledgments

Special thanks to Elisabeth Roberts who assembled a 10-drawer synoptic collection of nearly 400 species (with up to 20 specimens of each to reflect morphological variation) from the Smithsonian Institution collection. This collection served as the core resource for developing the key and providing the subjects for the auto-montage images. Lisa also took many of the full dorsal habitus photos, mostly using the Microptics system. Special thanks to Gino Nearn, Charyn Micheli, Norm Woodley, Serge Laplante, Deblyn Mead, and Annie Ray for helping to test the key and for their moral support and encouragement. Michael Gates, Mike Thomas, and Allen Norrbom also reviewed this key. I thank Amanda Hodges, Eric Day, and all the students of the 2006 Southern Plant Pest Diagnostic Network Workshop in Blacksburg, Virginia.

The students in this workshop thoroughly tested an earlier version of the key and recommended many areas for refinement. I appreciate the help Gino Nearn provided during that course. For sending some images and specimens of Florida specialties, mostly from the Florida State Collection of Arthropods (FSCA), I thank Mike Thomas, Paul Skelley, and Gino Nearn. Mike Thomas, Roy Morris, Shane Hill, and Gino Nearn developed the very useful *Cerambycidae of Florida* website that I found quite helpful while working on this key. Thanks to Piotr Naskrecki, Brian Farrell, and Phil Perkins for their joint effort in developing the important Harvard Holotype Image Database that helped resolve some species distinctions. Natalie Allen assisted me by entering data on the seasonality and hosts for many species, and taking some dorsal habitus photos.

Special thanks also to David Smith for providing a huge amount of eastern U. S. longhorned beetles from his West Virginia malaise trap samples. These were invaluable specimens for teaching the identification workshop in Blacksburg, and also for enhancing our knowledge of distribution and seasonality of eastern U. S. longhorned woodboring beetles.

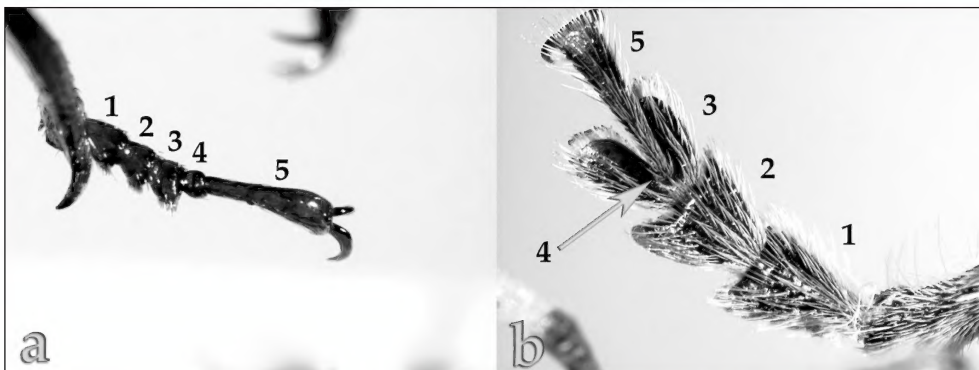
Lastly, I am very appreciative to Terry Seeno for performing the tedious page layout, formatting, and final editing and to Michael Schauff for locating funds within USDA to pay for most of the printing cost.

Illustrated Key to the Longhorned Woodboring Beetles of the Eastern United States

1. Antennal insertions at fronto-clypeal margin, near mandibular insertion (a, b). Acute lateral pronotal tubercles present (b). Maxillary palpi long, about as long as first three protarsomeres combined (b). Antennal scape curved at base and longer than head (b). Prosternal process narrow, not expanded at apex (c). Elytral apices bispinose and patterned as in (d) (Disteniinae)
..... *Distenia undata* (Fabricius)
- 1'. Antennal insertions closer to eye, not at fronto-clypeal margin. Other characters not present in combination2



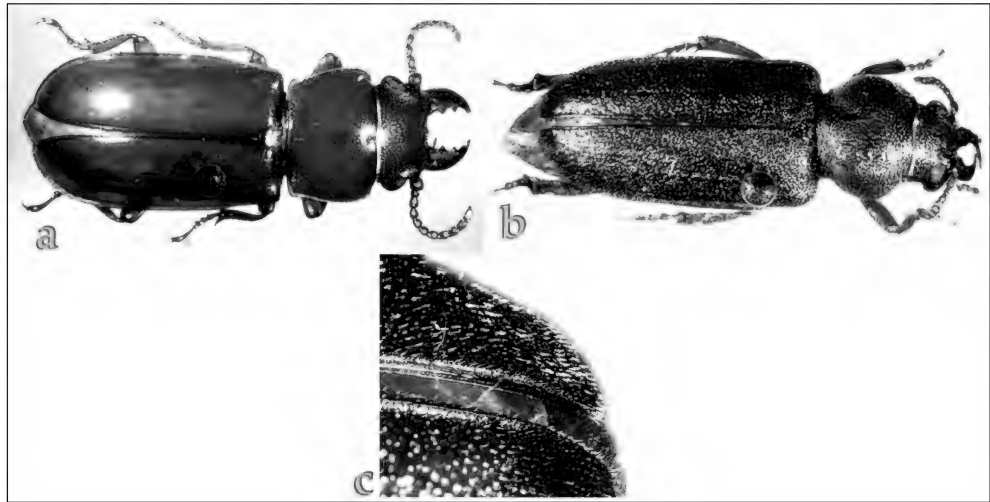
- 2(1'). Tarsi obviously pentamerous, 4th tarsomere not contained inside lobe of 3rd tarsomere
(a). In general, not typical cerambycid facies3
- 2'. Tarsi pseudo-tetramerous (4th tarsomere very small, nearly hidden inside lobe of 3rd tarsomere)
(b)5



Key

3(2). Body glabrous, smooth, shiny, red; carabid-like appearance (a) (Parandrinae).....**4**

3'. Body with very short, fine, appressed hairs (not very conspicuous), rough surface, not very shiny, black or very dark red (b, c) (Spondylidinae) *Scaphinus muticus* (Fabricius)



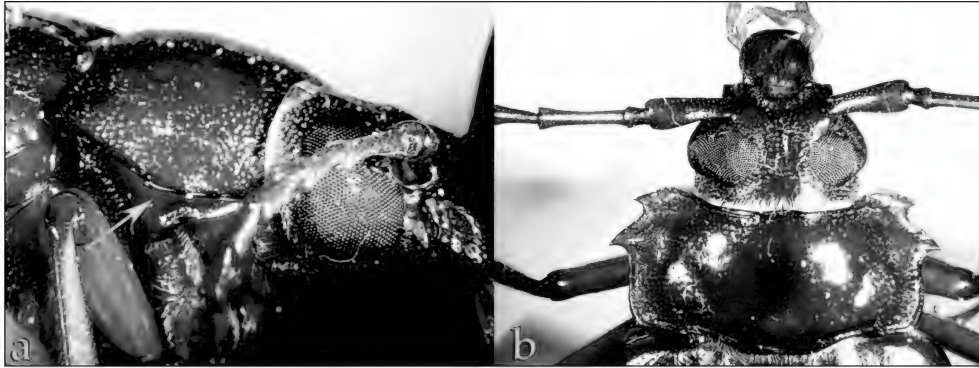
4(3). Tarsi with conspicuous pad with paired setae exposed between claws (a), anterolateral region of pronotum without explanate region (b)..... *Hesperandra polita* (Say)

4'. Tarsi without seta-bearing pad between claws (c). Anterolateral region of pronotum with explanate region (d)..... *Neandra brunnea* (Fabricius)



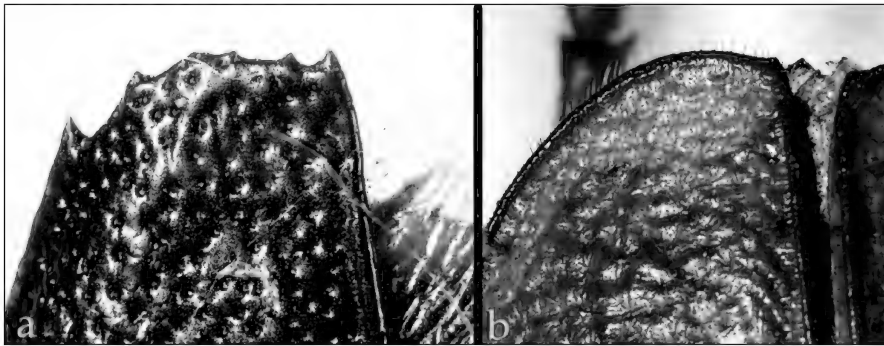
5(2'). Pronotum with distinct lateral margin (a). Margin nearly always crenulate or adorned with teeth (b). Mandibles usually prominent (b). Elytra usually glabrous. Generally large species, most over 2 cm (Prioninae).....**6**

- 5'. Pronotum without defined, complete lateral margin. Mandibles not very prominent in most species. Elytra usually with pubescence. Species of variable size, although most are less than 2 cm21



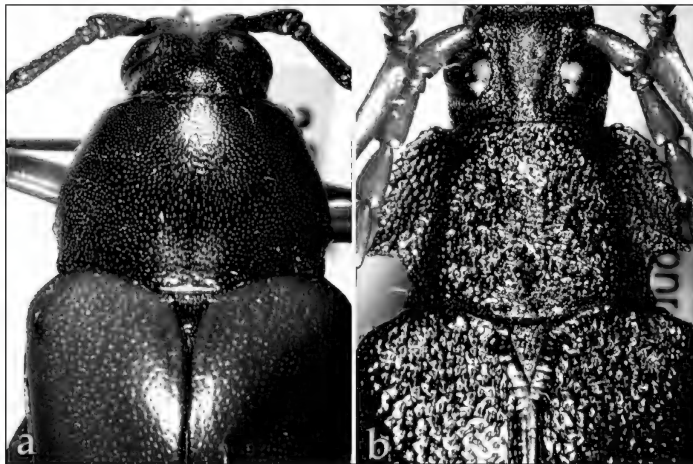
- 6(5). Elytral apices multidentate (a).....7

- 6'. Elytral apices rounded to suture which may or may not have a spine (b).....9



- 7(6). Pronotum very smooth, with numerous, but only very shallow punctures. Lateral margin of pronotum with only very small denticles (a) *Sphenostethus taslei* (Buquet)

- 7'. Pronotum very rough, with very large punctures and ridges. Lateral margin of pronotum with strong crenulations, produced into a broad spine at posterior (b) (*Elateropsis*, known only from Florida)8



Key

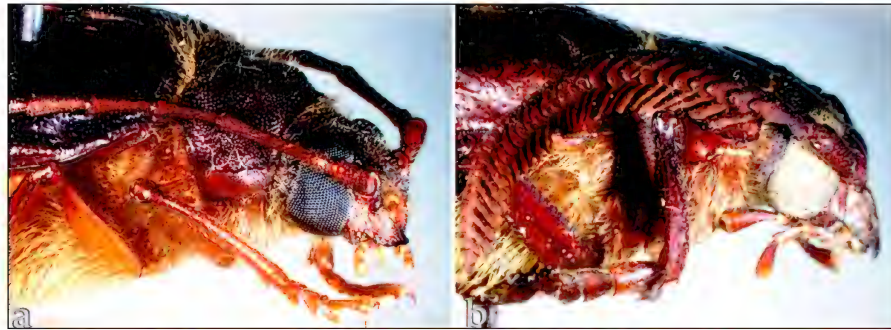
8(7'). Antennae black (a) *Elateropsis rugosus* Gahan

8'. Antennae reddish (b)..... *Elateropsis scabrosus* Gahan



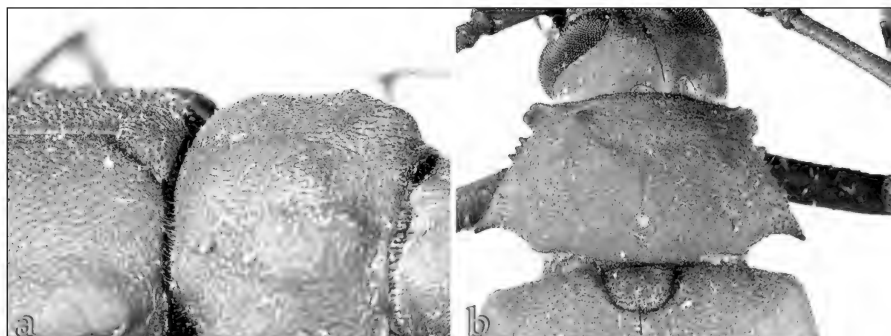
9(6). Femora densely pubescent with long hairs. Thorax densely pubescent ventrally with long hairs (and dorsally in males) that are not appressed (a)..... *Tragosoma depsarium* (Linnaeus)

9'. Femora mostly glabrous; if venter of thorax is pubescent, then hairs are appressed and short (b)10



10(9'). Scutellum protuberant, bulging above elytral surface (a). Lateral margin of pronotum dentate, with a prominent posterior spine (b). Third antennomere approximately length of pronotum (unconfirmed introduction into Florida) *Strongylaspis corticarius* (Erichson)

10'. Scutellum not raised above level of elytral surface. Lateral margin of pronotum variable, usually with different arrangement of spines or crenulations. Third antennomere distinctly shorter than pronotum in most species11



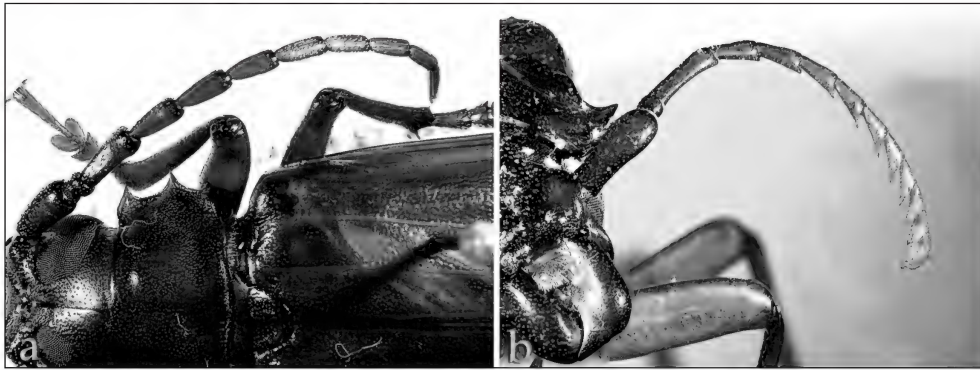
11(10'). Lateral margin of pronotum produced into 2 or 3 main spines or angulate projections (a)...**12**

11'. Lateral margin of pronotum crenulate or multidentate with many small spines or teeth (b).....**19**



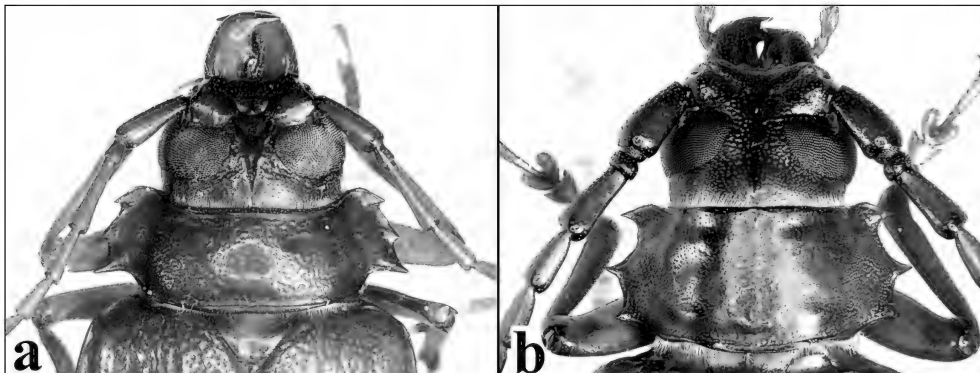
12(11). Antennae 11-segmented (a)**13**

12'. Antennae at least 12-segmented (b) (*Prionus*)**14**



13(12). Third antennomere about as long as pronotum (pronotum very short and broad). Mandibles long and directed anteriorly. Females with metasternum mostly glabrous (a)
.....*Derobrachus brevicollis* Audinet-Serville

13'. Third antennomere shorter than pronotum (pronotum longer and not as broad). Mandibles not as long and usually directed partially downward. Females with metasternum mostly pubescent (b).....*Orthosoma brunneum* (Forster)



Key

14(12'). Antennae with at least 25 antennomeres (often over 30) (a).....*Prionus fissicornis* Haldeman

14'. Antennae with less than 25 antennomeres (usually around 20 or less)**15**



15(14'). Integument black. 12 antennomeres (a).....*Prionus palparis* Say

15'. Integument pale to dark reddish-brown. 12 or more antennomeres**16**



16(15'). Maximum width of pronotum (including spines) distinctly narrower than elytral base (a). Color pale reddish-brown..... *Prionus debilis* Casey

16'. Maximum width of pronotum (including spines) about equal to elytral base (b). Color light to dark reddish-brown.....**17**



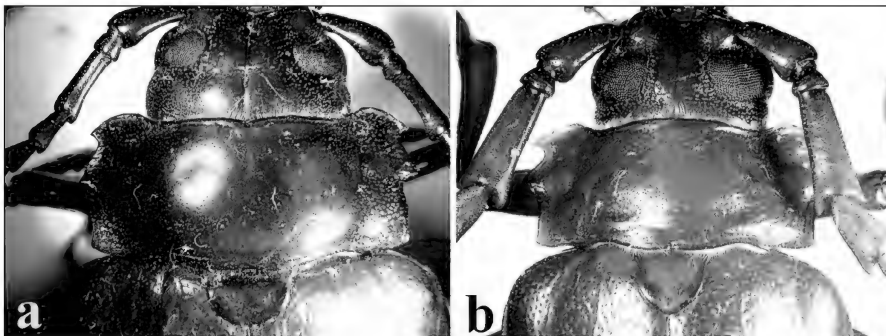
17(16'). Antennae with more than 12 segments (usually more than 15). Antennomeres beyond eight strongly appendiculate (a).....*Prionus imbricornis* (Linnaeus)

17'. Antennae with 12 segments. Antennomeres only weakly appendiculate18



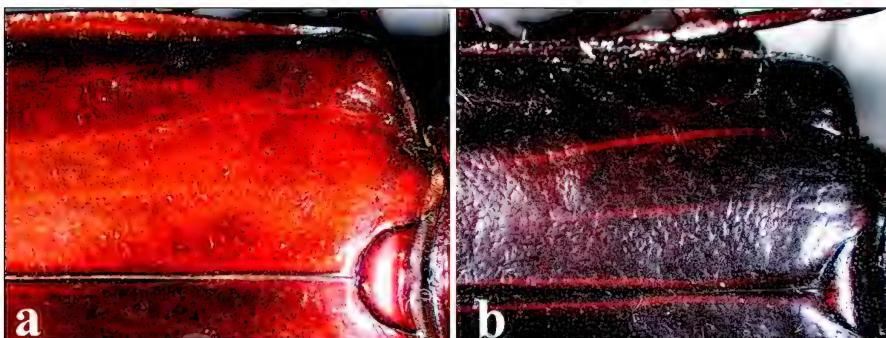
18(17'). Upper eye lobes broadly separated (more than width of scutellum) (a). Central region of pronotum very shiny with very few punctures (a). Costae mostly obscured by integumental wrinkles.....*Prionus laticollis* (Drury)

18'. Upper eye lobes closer together (less than width of scutellum) (b). Central region of pronotum duller, with scattered punctures (b). Costae distinct, mostly uninterrupted by integumental wrinkles *Prionus pocularis* Dalman



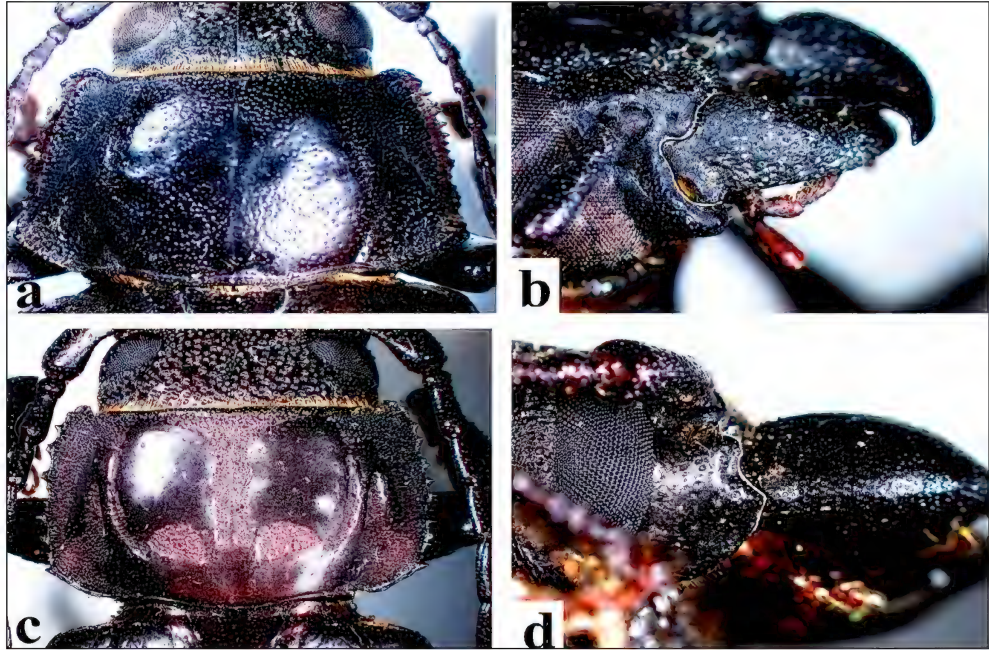
19(11'). Elytral surface smooth, shiny, without punctures or wrinkles (a). Color reddish-brown *Stenodontes chevrolati* Gahan

19'. Elytral surface with wrinkles and weakly defined punctures, less shiny (b) Color dark brown to black.....20

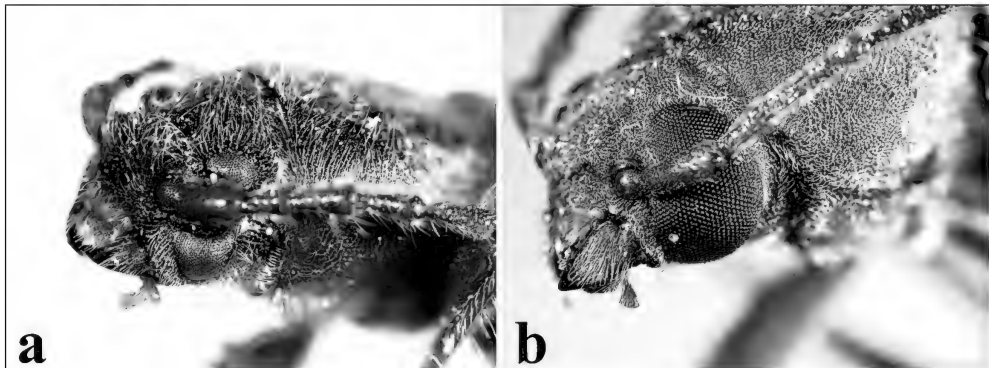


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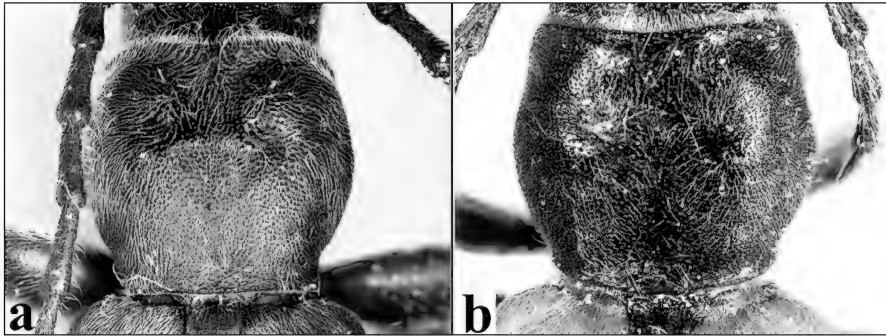
- 20(19'). Pronotum distinctly narrowed anteriorly at margin (a). Genal margin near mandible insertion with one or no tubercles (b)..... *Archodontes melanopus* (Linnaeus)
- 20'. Pronotum only weakly narrowed anteriorly at margin (c). Genal margin near mandible insertion bituberculate (d)..... *Mallodon dasystemus* (Say)



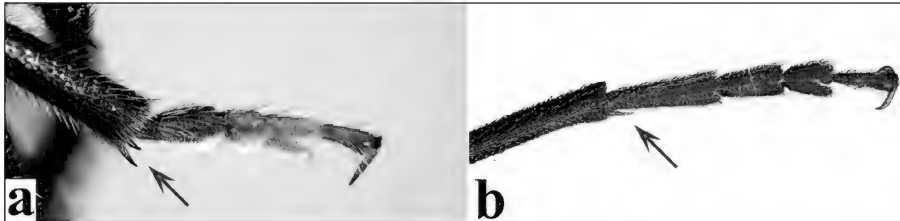
- 21(5). Second antennomere long (nearly half length of scape or longer). Brown or black species, never colorful or with metallic coloration. Mesonotum with stridulatory plate divided by median line (only visible through dissection, or if prothorax is bent downward) (Aseminae except *Atimia* and *Michthisoma*)22
- 21'. Second antennomere short, in nearly all species, much less than half length of scape. Coloration variable. Stridulatory plate divided or not27
- 22(21). Eyes completely divided into separate upper and lower lobes (a) (*Tetropium*)23
- 22'. Eyes entire (b).....24



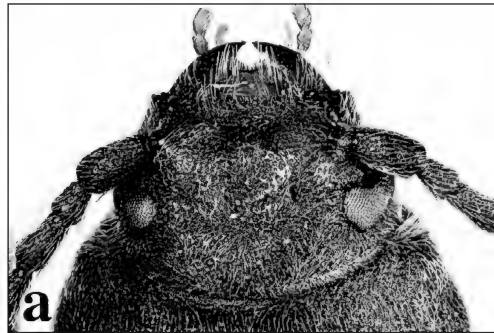
- 23(22).** Pronotum with dense, coarse punctures and microsculpture giving a matte, non-reflective finish
(a). Elytral and venter coloration very similar, brown-gray *Tetropium schwarbianum* Casey
- 23'.** Pronotum with irregular punctation and shiny, glabrous areas (b). Elytral and venter coloration contrasting: elytra reddish brown, venter piceous *Tetropium cinnamopterum* Kirby



- 24(22').** Anterior tibia with two spurs (a). Antennae very short, extending only to about basal third of elytra (*Asemum*).....25
- 24'.** Anterior tibia with one spur (b). Antennae extending to about half length of elytra or longer (*Arhopalus*)26



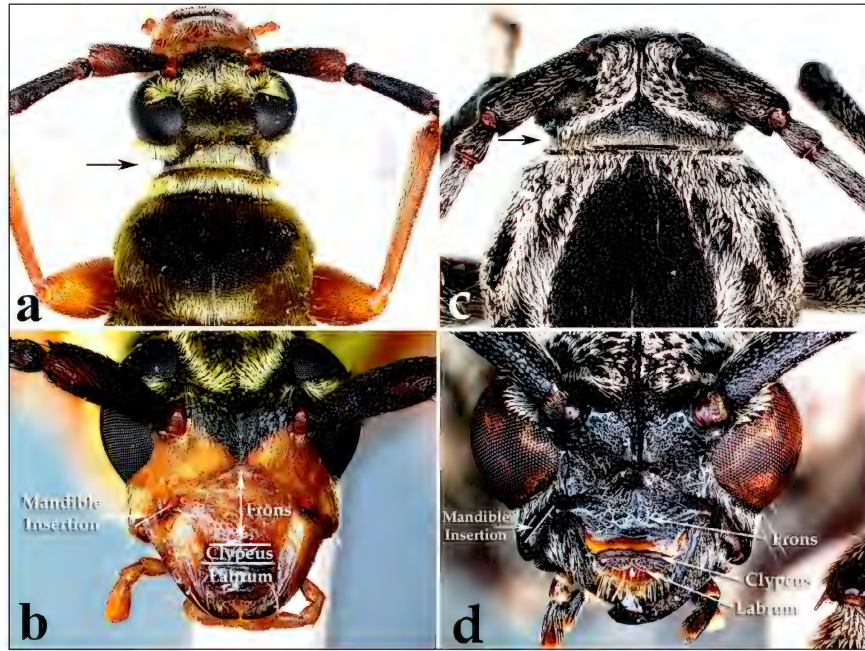
- 25(24').** Antennae thickened at base (especially scape). Interantennal region strongly impressed (no specimens available for imaging).....
..... *Asemum australe* LeConte
- 25'.** Antennae not strongly thickened at base (scape not much thicker than remaining segments). Interantennal region nearly flat, not impressed (a)...
..... *Asemum striatum* (Linnaeus)



- 26(24').** Third tarsomere of posterior legs cleft for about half its length.....
..... *Arhopalus foveicollis* (Haldeman)
- 26'.** Third tarsomere of posterior legs cleft nearly to base (a) (note: I have elected not to distinguish among the various subspecies of *Arhopalus rusticus* (Linnaeus)).....
..... *Arhopalus rusticus* (Linnaeus)

Key

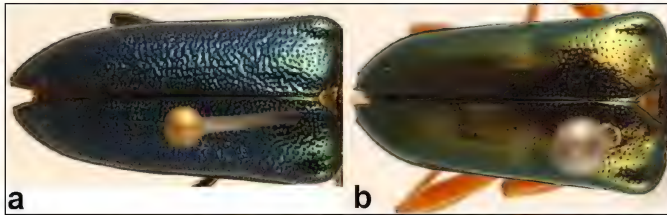
- 27(21')**. Pronotum of most species tapering or constricted anteriorly, combined with a narrowing of head behind eyes giving a neck-like appearance (a). Frons, gena, and sometimes clypeus elongate, giving appearance of mouthparts more elongated or protuberant than in other groups (b). Body of most species distinctly tapering posteriorly. Stridulatory plate of mesonotum divided by a median line (best seen with dissection) (*Lepturinae*, except *Necydalis*).....**28**
- 27'**. Pronotum and head articulation not narrowed in most species; without neck-like appearance (c). Frons, gena, and clypeus not produced such that mouthparts appear protuberant (d). Body of most species only weakly tapering posteriorly, or parallel-sided. Stridulatory plate of mesonotum not divided by median line (*Atimia* & *Michthisoma* are exceptions in this feature; best seen with dissection) (*Cerambycinae*, *Lamiinae*, *Necydalis*).....**110**



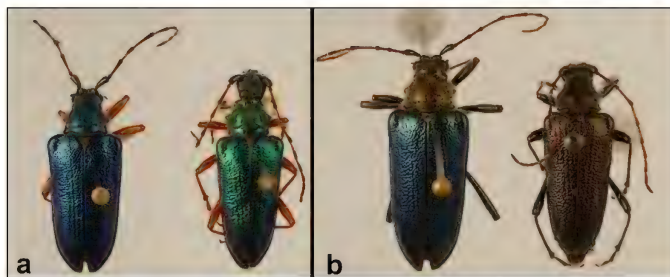
- 28(27)**. Pronotum with lateral tubercles (either acute or rounded), defined by constriction immediately anterior and posterior of tubercle (a) (see also 39a-b).....**29**
- 28'**. Pronotum often campaniform or nearly so, without distinct lateral tubercles (although a large, broad swelling may be present, but no tubercle is projecting) (b).....**48**



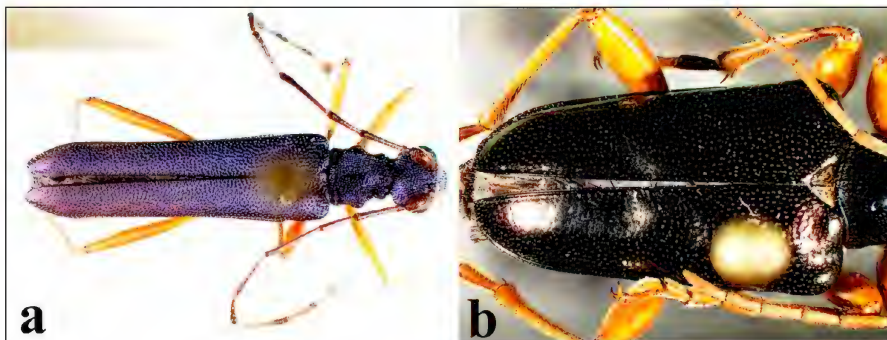
- 29(28).** Elytra (and usually pronotum) metallic iridescent green, blue, or dark purple (perhaps appearing black except under strong illumination)**30**
- 29'.** Elytra without metallic iridescent coloration (typically yellow, brown, or dull black, with or without maculae or vittae)**34**
- 30(29).** Elytra with punctures deep, irregularly distributed, surface appearing uneven and semi-rugose. Elytra always broad (much less than 4 times longer than wide) (a)**31**
- 30'.** Elytra with punctures very shallow (if deep, then elytra narrow, about 4 times longer than wide), regularly distributed, surface appearing smooth between punctures (b)**33**



- 31(30).** Pronotum heavily punctate and rugose. Lateral pronotal tubercles strongly produced (no specimens available for imaging)*Anthophylax hoffmani* **Beutenmüller**
- 31'.** Pronotum densely punctate, not rugose. Lateral pronotal tubercles moderately projecting.....**32**
- 32(31').** Femora reddish-testaceous (a) *Anthophylax cyaneus* (**Haldeman**)
- 32'.** Femora black or piceous (b) *Anthophylax viridis* **LeConte**

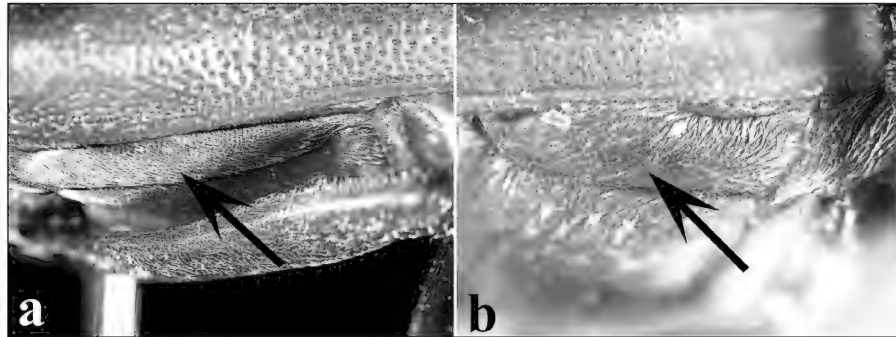


- 33(30').** Very long and slender body (elytron more than 4 times as long as wide). Surface of elytron dull (a)*Encyclops caerulea* (**Say**)
- 33'.** Body short, wedge shaped (elytron less than 3 times as long as wide). Surface of elytron extremely shiny (b).....*Gaurotes cyanipennis* (**Say**)



Key

- 34(29')**. Elytra (excluding epipleural edge) unicolorous, without vittae or maculae, or differently colored pubescent spots on dorsal surface.....**35**
- 34'**. Elytra (excluding epipleural edge) of at least two colors, with vittae or maculae, or differently colored pubescent spots on dorsal surface (or, if appearing as one color, with distinct vittae of pubescence).....**40**
- 35(34)**. Metepisternum thin, elongate (about 4 times longer than wide) (a).....
.....*Centrodera decolorata* (Harris)
- 35'**. Metepisternum thick, short (about 2.5 times longer than wide) (b).....**36**



- 36(35')**. Pronotum longer than wide; anterior constriction about one-third overall length of pronotum (a).....**37**
- 36'**. Pronotum as long as wide; anterior constriction less than one-fourth overall length of pronotum (b).....**39**



- 37(36)**. Antenna with third antennomere subequal to fourth (a).....*Stenocorus cylindricollis* (Say)
- 37'**. Antenna with third antennomere distinctly longer than fourth (b).....**38**



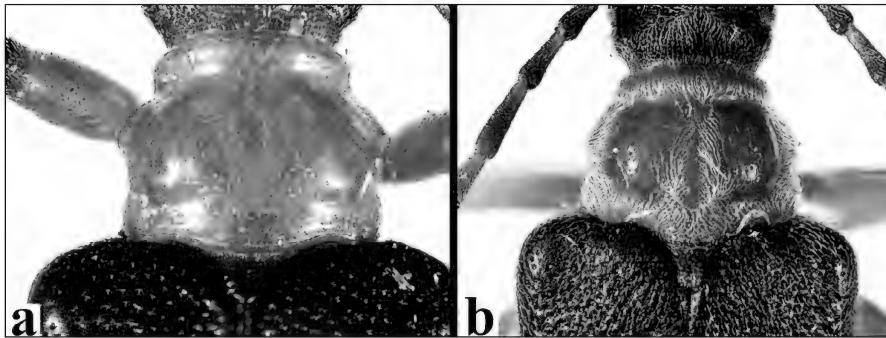
38(37'). Elytra color tawny, light brown, to red-brown (a) *Stenocorus cinnamopterus* (Randall)

38'. Elytra color very dark, black or piceous (b) *Stenocorus schaumii* (LeConte)



39(36'). Pronotum mostly glabrous or conspicuously glabrous around discal swellings usually (a) *Brachysomida bivittata* (Say)

39'. Pronotum mostly pubescent or conspicuously pubescent around discal swellings usually (b) *Gaurotes thoracica* (Haldeman)



40(34'). Antennae extending only to basal one-third of elytra (or less). Elytra with distinctly raised costae (a) *Rhagium inquisitor* (Linnaeus)

40'. Antennae extending to at least halfway down elytra. Elytra appearing smooth, without raised costae 41

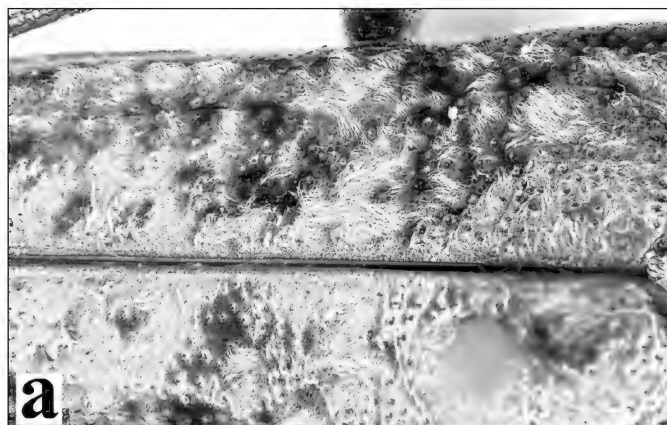


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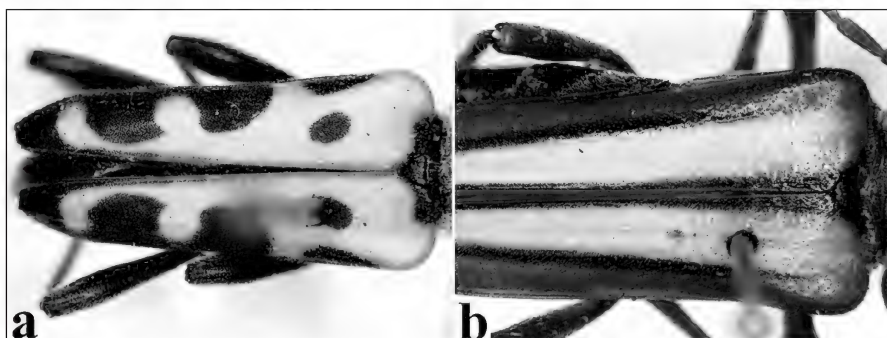
- 41(40'). Fourth antennomere very short, little more than twice as long as second (a).....
 *Centrodera sublineata* LeConte
- 41'. Fourth antennomere at least 3-4 times as long as second.....42



- 42(41'). Elytra with conspicuous patches of pubescence covering some regions (a).....
 *Anthophylax attenuatus* (Haldeman)
- 42'. Elytra without patches of pubescence partially obscuring surface.....43



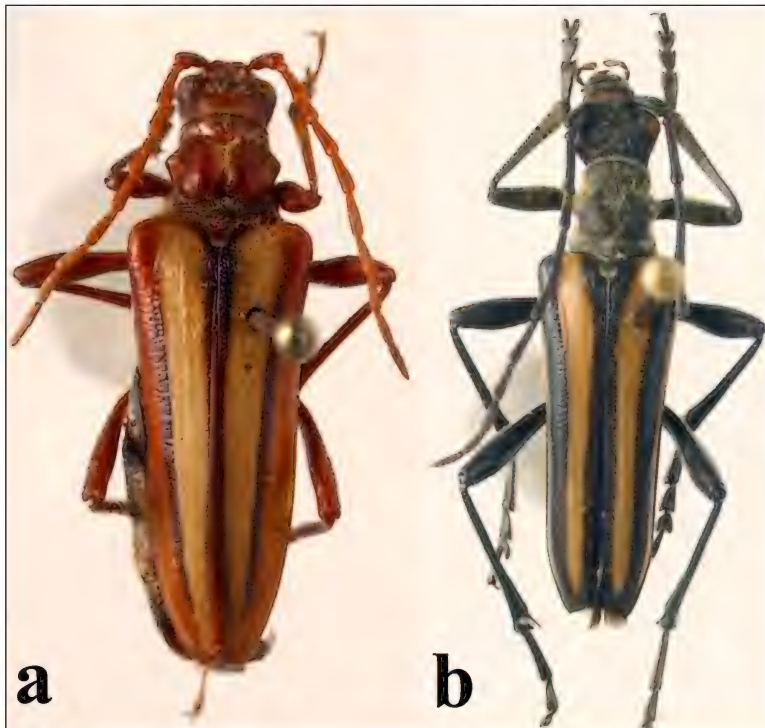
- 43(42'). Elytra without vittae. Maculae present in form of spots (which may or may not be interconnected) (a).....44
- 43'. Elytra with long vittae present (b).....45



- 44(43). Each elytron with one or two distinct and separate roundish black maculae.....
 *Centrodera quadrimaculata* (Champlain & Knull)
- 44'. Each elytron with 3-4 black maculae which may be partially interconnected (a, showing both patterns) *Evodinus monticola* (Randall)

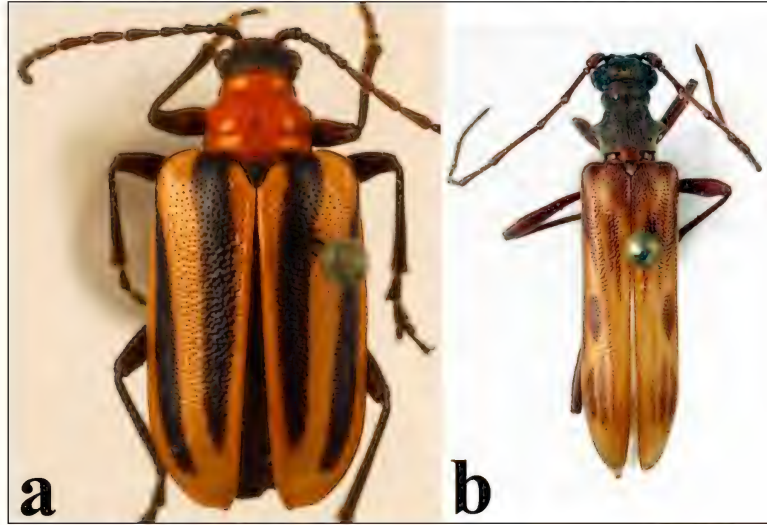


- 45(43'). Elytral suture with distinct dark vitta running nearly the entire length (see 43b).....46
- 45'. Elytral suture without a dark vitta present.....47
- 46(45). Legs and antennae mostly light colored, pale reddish-brown (a).....
 *Stenocorus trivittatus* (Say)
- 46'. Legs and antennae mostly very dark, piceous to black (b)..... *Stenocorus vittiger* (Randall)

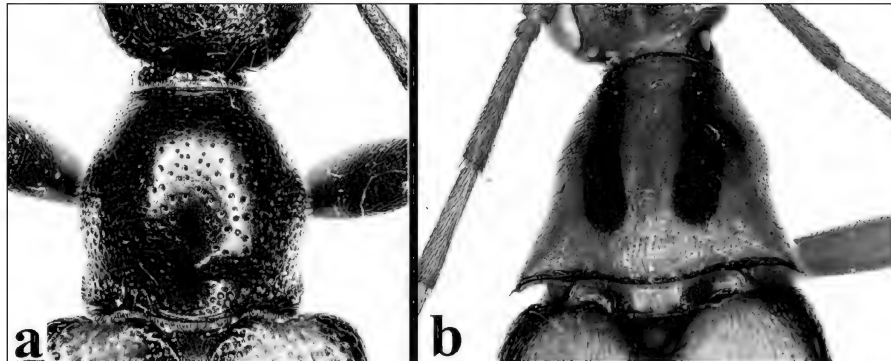


Key

- 47(45'). Each elytron with two dark vittae of approximate equal size, shape, and length. Short and broad, elytron about 3 times as long as wide *Brachysomida bivittata* (Say)
- 47'. Each elytron with 4-7 vittae and maculae of differing size, shape, and length. Long and narrow, elytron about 5 times as long as wide *Leptorhabdium pictum* (Haldeman)



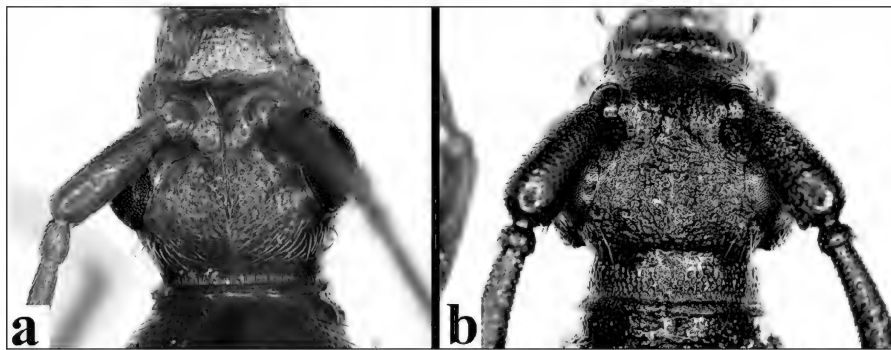
- 48(28'). Pronotum with posterior margin much narrower than elytral base; not bell-shaped. Lateral margin of pronotum not forming a continuous or nearly continuous contour with elytral margin (a) (see also 66a and 67a-b).....49
- 48'. Pronotum with posterior margin much wider than remainder, about as wide as elytral base; distinctly bell shaped. Lateral margin of pronotum forming a continuous or nearly continuous contour with elytral margin (b) (see also 88a and 90a-b).....79



- 49(48). Antennae with at least some antennomeres (usually most) distinctly bicolored (light at base, dark at apex, with abrupt change) (see 51b).....50
- 49'. Antennae with antennomeres uniformly colored (usually dark) (note: some basal antennomeres may be pale while apical ones are darker, but each antennomere is unicolorous)58

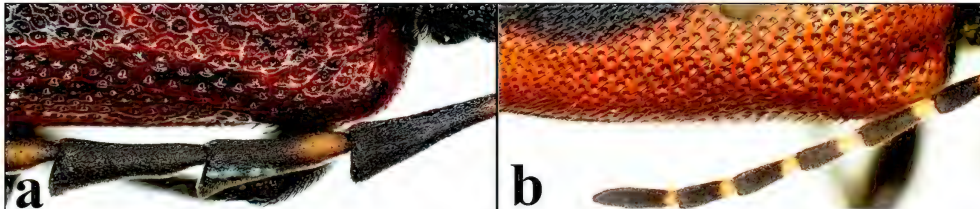
50(49). Head with a slight, gradual constriction behind eyes (a). Elytra vittate dorsally.....**57**

50'. Head with an abrupt, strong constriction behind eyes (b). Elytra with, at most, a vitta along epipleuron**51**



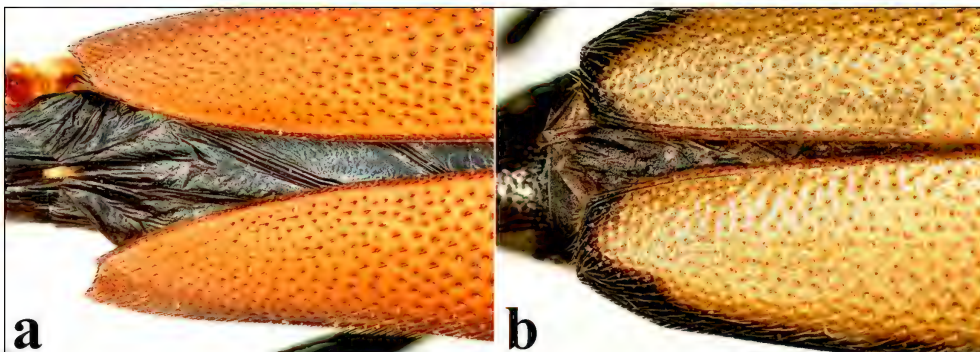
51(50'). Antennomeres strongly serrated (a). Elytral apices bidentate. Elytral and pronotal punctures large, deep, and confluent giving surface very uneven, rough appearance (a) *Stictoleptura canadensis* (Olivier)

51'. Antennomeres weakly or not serrated (b). Elytral apices rounded, truncate or acuminate, not bidentate. Elytral and pronotal punctures not as pronounced as in former (b).....**52**



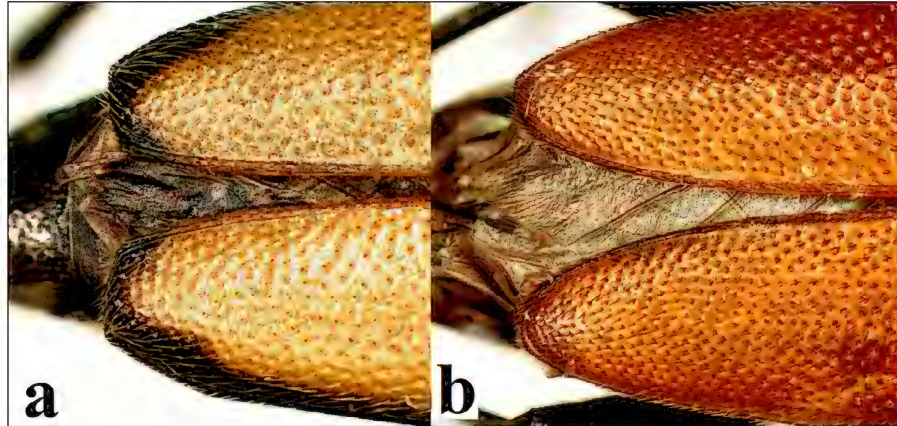
52(51'). Elytral apices acuminate; outer angle projecting noticeably more than sutural angle (a). Punctures distinct and not confluent. Elytra reddish without black markings..... *Brachyleptura rubrica* (Say)

52'. Elytral apices rounded or truncate; sutural and outer angles roughly equally developed (b). Punctures more closely spaced than in former. Elytra yellowish, reddish, or black, or some combination of those colors.....**53**

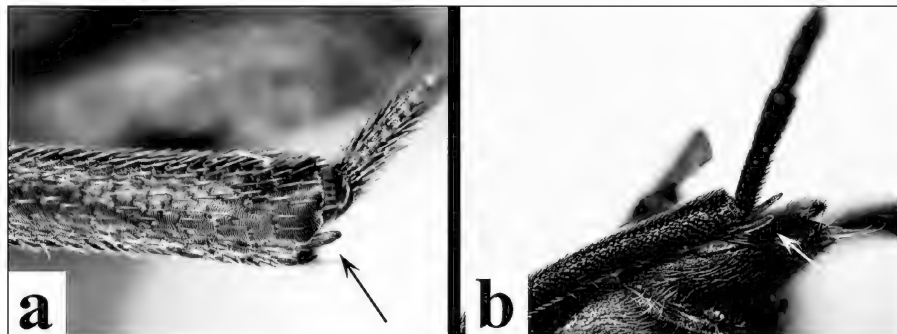


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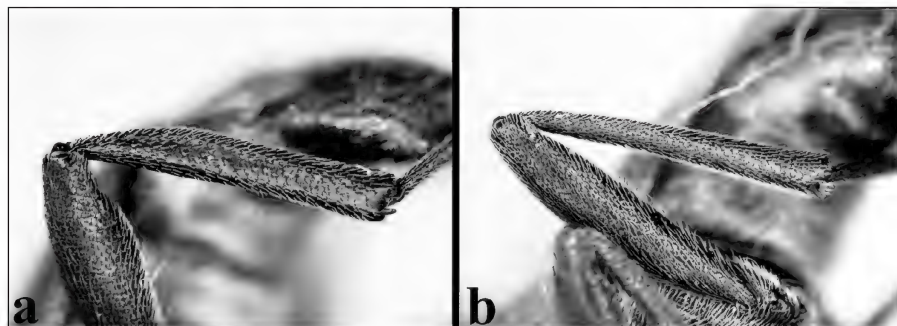
- 53(52')**. Elytral apices weakly dehiscent (a). Elytra pale orange with black outer margin along epipleuron and sometimes at apex *Brachyleptura circumdata* (Olivier)
- 53'**. Elytral apices moderately to strongly dehiscent (b). Elytra reddish or black, or some combination of those colors **54**



- 54(53')**. Hind tibia with one tibial spur (a); last ventrite with deep medial impression (males) **55**
- 54'**. Hind tibiae with two tibial spurs (b); last ventrite with shallow or absent medial impression (females) **56**



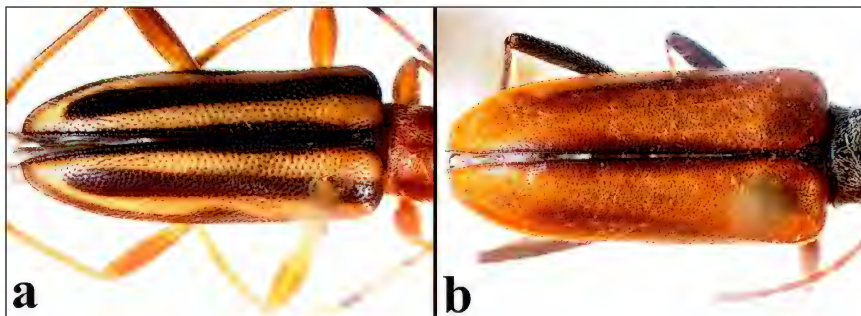
- 55(54)**. Hind tibia unevenly thickened, slightly curved (a) *Brachyleptura vagans* (Olivier)
- 55'**. Hind tibia nearly of even thickness, straight (b) *Brachyleptura champlaini* Casey



- 56(54').** Elytra with margin (at least) black (a) (this character is not completely reliable, and variant forms exist which cannot be distinguished from *B. champlaini*).....*Brachyleptura vagans* (Olivier)
- 56'.** Elytra without black margins (b)*Brachyleptura champlaini* Casey



- 57(50).** Venter pale testaceous. Elytra with 2-3 black vittae (rarely very faint) (a). Males with distinct tooth and curvature in inside margin of front tibiae..... *Metacmaeops vittata* (Swederus)
- 57'.** Venter dark. Elytra with, at most, a vague sutural and/or epipleural vitta (b). Males without modified tibiae *Acmaeops proteus* (Kirby)



- 58(49').** Elytra with conspicuous metallic iridescence.....**59**
- 58'.** Elytra without conspicuous metallic iridescence**60**

- 59(58).** Head with region at eyes much wider than base (a); basal antennomeres not expanded at apex; small species, generally about 1 cm long.....*Pseudogaurotina abdominalis* (Bland)
- 59'.** Head with region at eyes only slightly wider than base; basal antennomeres strongly expanded at apex; large species, most specimens over 2 cm long.....*Desmocerus palliatus* (Forster)



Key

60(58'). Elytra uniformly orange colored except for apex which is abruptly black (a). Middle tarsi and claws of males thickened compared to hind tarsi (*Trigonarthris*)**61**

60'. Elytra without coloration as described. Middle tarsi not modified**63**



61(60). Pronotum with dense, long pubescence, mostly obscuring punctures; without longitudinal impression medially (a) *Trigonarthris minnesotana* (Casey)

61'. Pronotum with less dense pubescence, punctures easily seen; longitudinal impression present medially (b, c).....**62**



62(61'). Pronotum with distinct angles at middle of side (see *b* above).....
.....*Trigonarthris atrata* (LeConte)

62'. Pronotum more rounded at sides (see *c* above).....*Trigonarthris proxima* (Say)

63(60'). Head and prothorax red, remainder of body and appendages black (a).....
.....*Neolosterna capitata* (Newman)

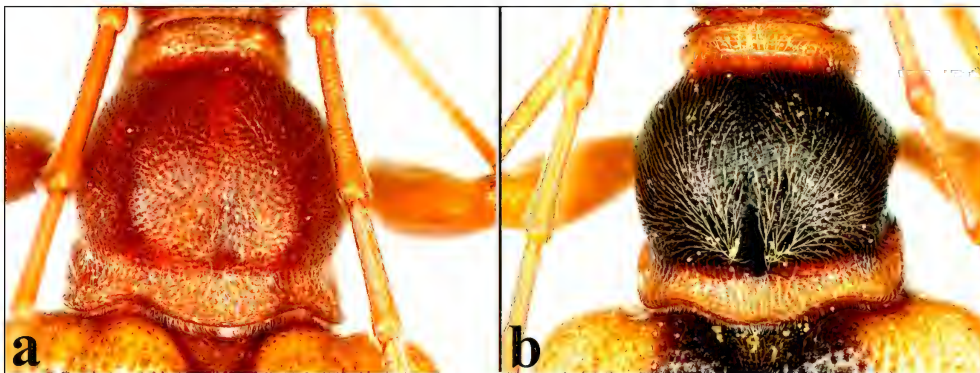
63'. Not the above color combination.....**64**



- 64(63'). Elytra with well defined maculae or vittae of contrasting color from adjacent regions65
- 64'. Elytra generally unicolorous, sometimes with very poorly delineated maculae with edges that gradate into adjacent color72
- 65(64). Legs uniformly pale reddish-brown66
- 65'. Legs, at least in part, dark brown to piceous or black68
- 66(65). Head, pronotum, and venter covered with dense, golden pubescence (a).....
.....*Strophiona nitens* (Forster)
- 66'. Dense, golden pubescence sparse or absent from head, pronotum, and venter.....67



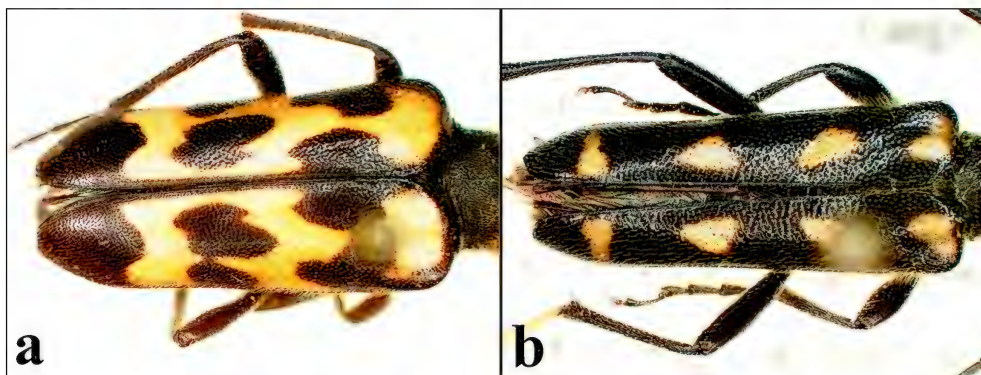
- 67(66'). Head and pronotum uniformly reddish-brown (a).....*Pidonia aurata* (Horn)
- 67'. Head and/or pronotum, at least in large part, piceous or black (b).... *Pidonia densicollis* (Casey)



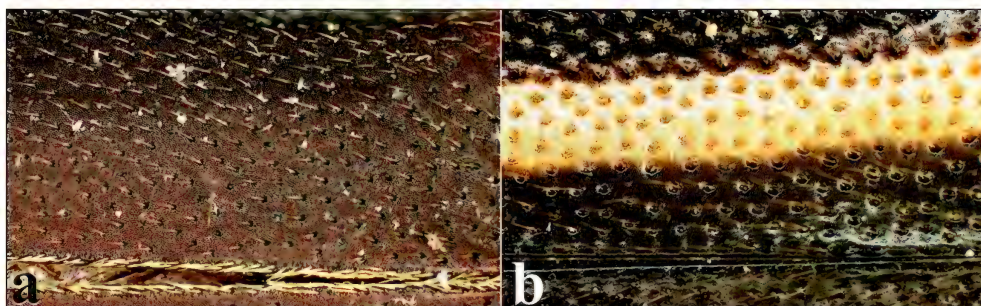
- 68(65'). Elytra with a series of pale spots (some of which may coalesce)69
- 68'. Elytra with a single, long vitta or one large macula70

Key

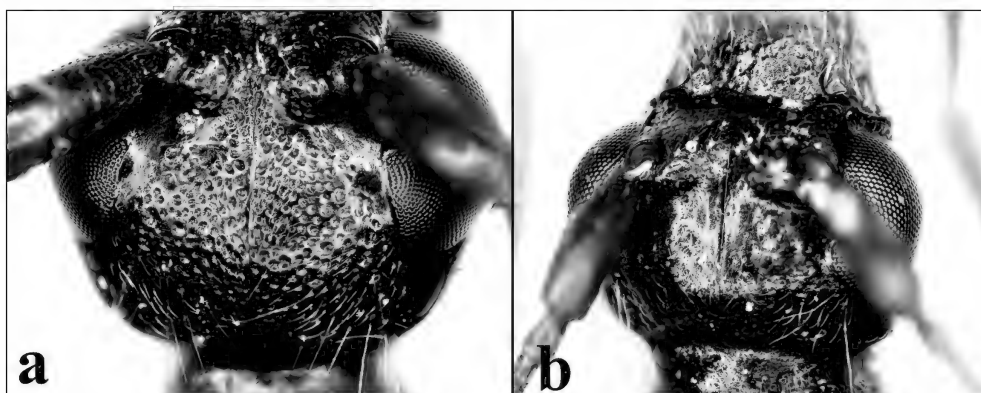
- 69(68).** Short and broad bodied, elytron about three times as long as wide (a). Metatarsi uniformly dark *Judolia montivagans* (Couper)
- 69'.** Elongate and narrow bodied, elytron more than 4 times as long as wide (b). Metatarsi in large part very pale testaceous *Xestoleptura octonotata* (Say)



- 70(68').** Integument without glossy appearance; micropunctate (a).....
.....*Acmaeops discoideus* (Haldeman)
- 70'.** Integument glossy; not micropunctate (b) **71**

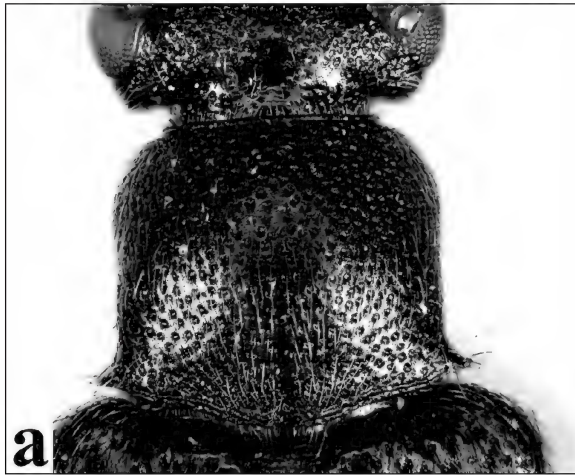


- 71(70').** Vertex of head between eyes with dense, conspicuous punctures (a).....
.....*Strangalepta abbreviata* (Germar)
- 71'.** Vertex of head between eyes without noticeable punctures (b)..... *Pidonia ruficollis* (Say)



72(64'). Posterolateral margins of pronotum extended into long tufts of hair giving base of pronotum a wider appearance (a) *Alosternida chalybaea* (Haldeman)

72'. Posterolateral margins of pronotum not extended in such a way with tufts of hair **73**



73(72'). Elytron with a vaguely defined black spot midway laterally (a)
 *Lepturopsis biforis* (Newman)

73'. Elytron without such a black macula **74**



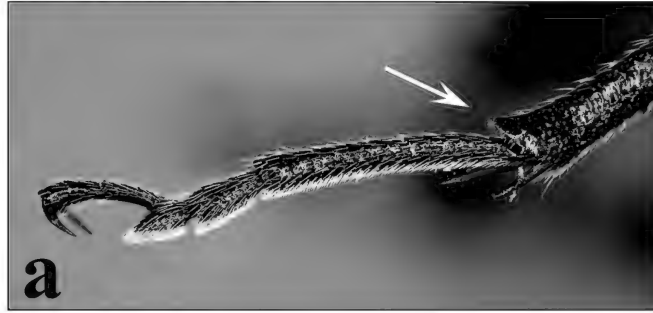
74(73'). Head and pronotum with sparse and inconspicuous punctation (a) (see also 71b)
 *Pidonia ruficollis* (Say)

74'. Head and pronotum with conspicuous punctation **75**

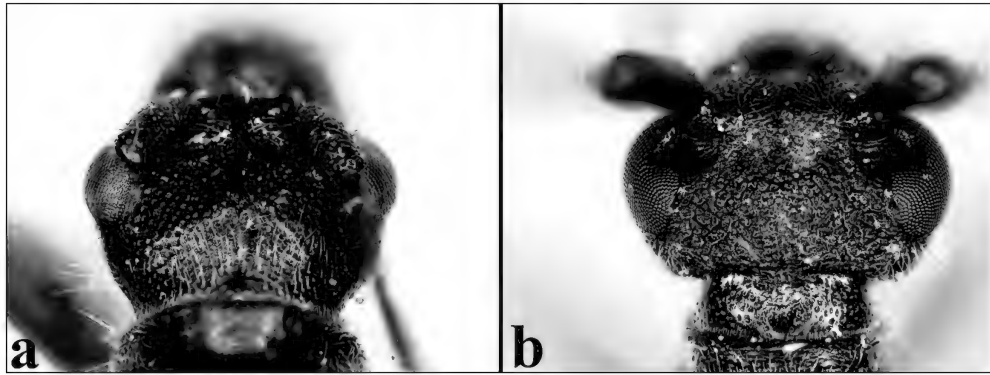


Key

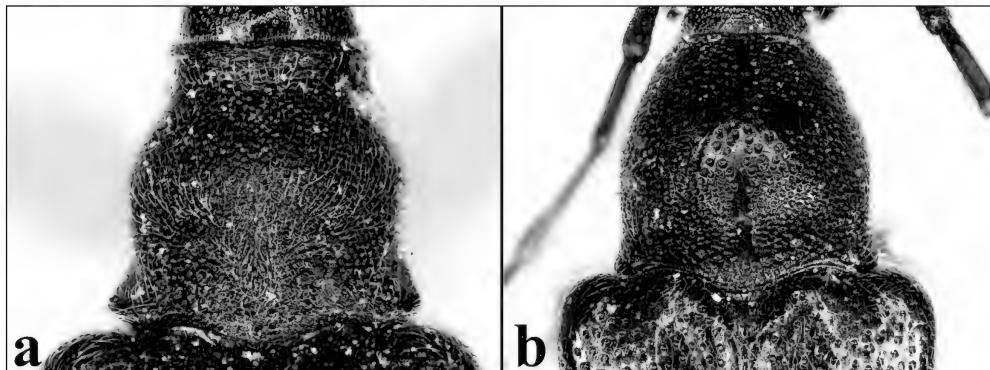
- 75(74')**. Dorsal apex of metatibia strongly extended along base of first tarsomere (a).....*Trachysida mutabilis* (Newman)
**76**
- 75'**. Apex of metatibia without elongation**76**



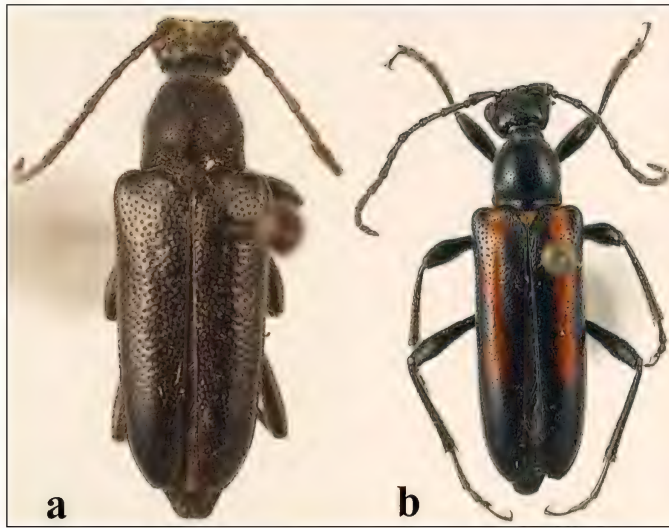
- 76(75')**. Head only slightly and gradually constricted behind eyes (a)*Acmaeops proteus* (Kirby)
76'. Head with strong, abrupt constriction behind eyes (b).....**77**



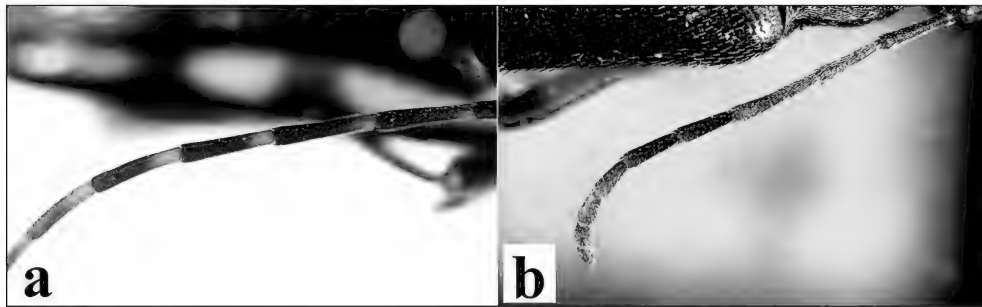
- 77(76')**. Posterior margin of pronotum distinctly expanded outward and distinctly much wider than remainder of pronotum (a). Metatibia distinctly longer than metafemur; first metatarsomere distinctly longer than remaining tarsomeres (including claws) together*Idiopidonia pedalis* (LeConte)
**78**
- 77'**. Posterior margin of pronotum weakly expanded outward and just barely wider than remainder of pronotum (b). Metatibia shorter than metafemur; first metatarsomere at most about as long as remaining tarsomeres (including claws) together**78**



- 78(77'). Punctures on pronotum very dense and closely spaced (see *b* above) (a).....
*Anoplodera pubera* (Say)
- 78'. Punctures on pronotum sparse and most widely separated (see 48a) (b).....
*Strangalepta abbreviata* (Germar)



- 79(48'). Most antennomeres distinctly bicolored (a).....80
- 79'. Most antennomeres unicolorous, at most 1-2 antennomeres vaguely bicolored (b)83

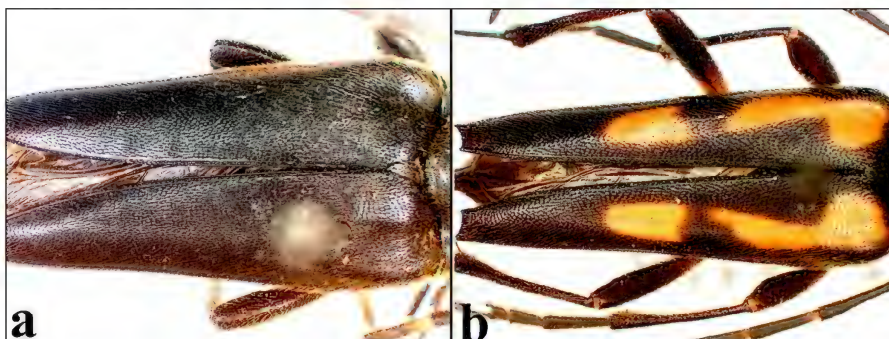


- 80(79). Femora pale testaceous, unicolorous. Elytra long and narrow, 5 times as long as wide (a)
*Analeptura lineola* (Say)
- 80'. Femora dark brown or distinctly bicolored, pale testaceous at base, dark at apex. Elytra
 wider, not as slender, 3-4 times as long as wide81

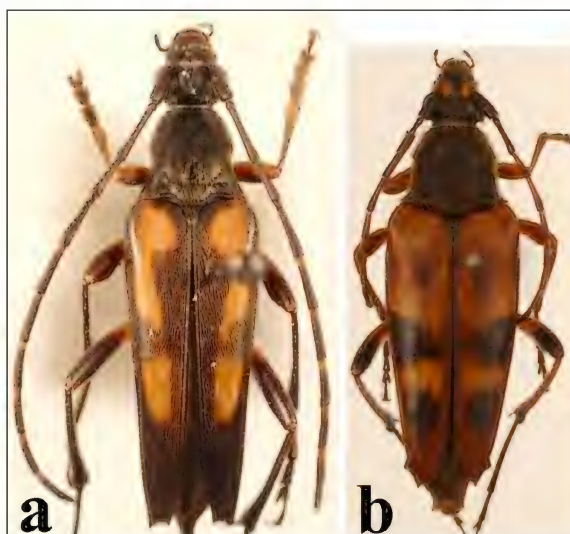


Key

- 81(80').** Elytra without a middle transverse dark macula (elytra either all black, all red, or with longitudinal reddish vitta down middle) (a) *Leptura abdominalis* (Haldeman)
- 81'.** Elytra with a middle transverse dark macula (elytra either mostly light reddish-brown, or with at least two large reddish-brown spots) (b).....**82**



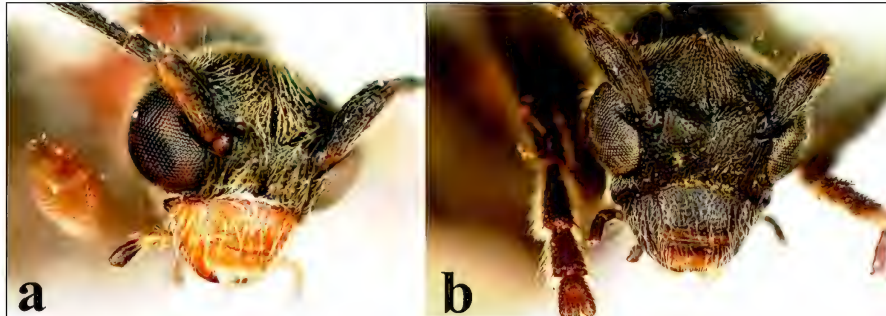
- 82(81').** Metatibia uniformly dark brown to black (a).....*Leptura subhamata* Randall
- 82'.** Metatibia bicolored, pale brown at basal three-fourths, dark brown to black at apex (b).....*Leptura obliterated deleta* (LeConte)



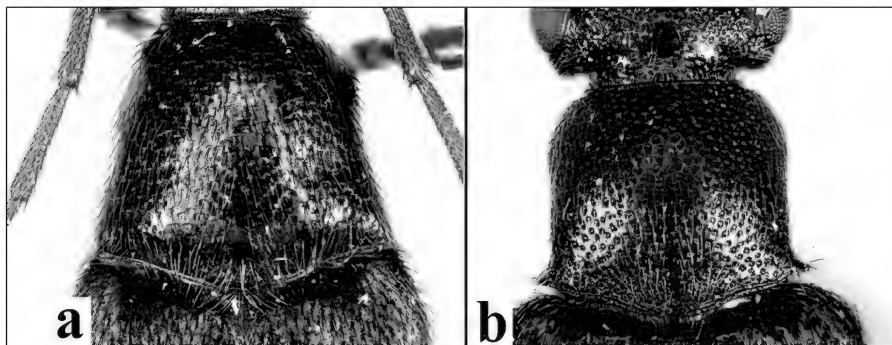
- 83(79').** Elytra with very strong lateral constriction at posterior third (a). Apical abdominal segment completely exposed, curving ventrally *Bellamira scalaris* (Say)
- 83'.** Elytra with vague or absent lateral constriction at posterior third. Apical abdominal segments variable, exposed or not.....**84**



- 84(83')**. Elytra uniformly very dark above, appearing black.....**85**
- 84'**. Elytra either with maculae (bicolored), or if unicolorous, not dark (either reddish or testaceous).....**91**
- 85(84)**. Head very dark**86**
- 85'**. Head reddish**89**
- 86(85)**. Legs in part pale testaceous.....**87**
- 86'**. Legs uniformly dark**88**
- 87(86)**. Pronotum often red (if black, then scape with ventral surface reddish). Clypeus, labrum, lower part of frons, basal palpomeres in most part, pale testaceous (a) (note: the uncommon species with a bicolored red and black pronotum, *Grammoptera exigua* (Newman), is excluded from this key).....*Grammoptera haematites* (Newman)
- 87'**. Pronotum always black (scape entirely black). Clypeus, labrum, palpi usually very dark (b)....
.....*Grammoptera subargentata* (Kirby)



- 88(86')**. Pronotum distinctly widest posteriorly; elytral-pronotal junction of same width (a). Elytra covered with dense, stiff hairs*Typocerus lugubris* (Say)
- 88'**. Pronotum about as wide at base as apex (b); elytral base distinctly wider than adjacent pronotum. Elytra with moderate, thin hairs.....*Alosternida chalybaea* (Haldeman)



Key

89(85'). Antennae and legs pale testaceous to reddish (a)..... *Strangalia bicolor* (Swederus)

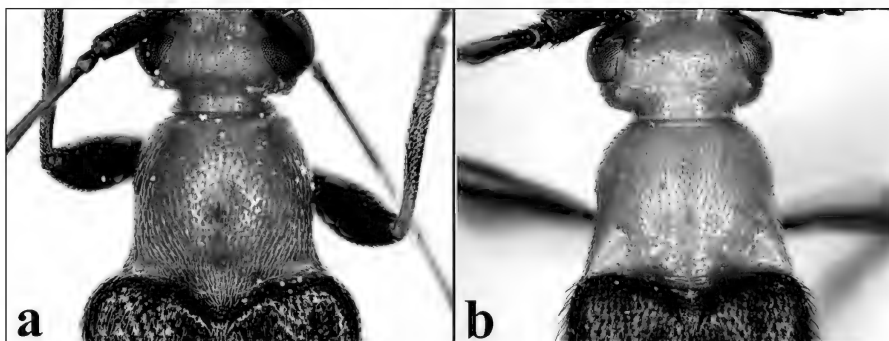
89'. Antennae and legs very dark.....**90**



90(89'). Postero-lateral angles of pronotum only moderately produced, lateral angles not elevated and not impressed at base (a). Elytra with high gloss..... *Neoalosterna capitata* (Newman)

90'. Postero-lateral angles of pronotum strongly produced, lateral angles elevated and strongly impressed at base (b). Elytra without strong glossy appearance.....

..... *Charisalia americana* (Haldeman)



91(84'). Pronotum with broad, black vitta at middle, reddish at sides, with that color continuing to humeri of elytra (and sometimes throughout basal two-thirds of elytra (a, both color forms) (photos courtesy of Florida State Collection of Arthropods).... *Lycochoriolaus lateralis* (Olivier)

91'. Pronotal and elytral coloration different.....**92**



- 92(91'). Elytra with apical two-thirds distinctly metallic blue or purple, along with head and pronotum; remainder of elytra non metallic yellow (a). Large species, greater than 2 cm long.....
*Desmocerus palliatus* (Forster)
- 92'. Elytra and body without above coloration. Non-metallic colored species. Most species less than 2 cm long93



- 93(92'). Elytra, except for black apical fourth or less, maroon and covered with dense velvety pubescence (a). Large species, most specimens about 3 cm long.....
*Stenelytrana emarginata* (Fabricius)
- 93'. Elytra without above coloration and pubescence. Species less than 2 cm long94



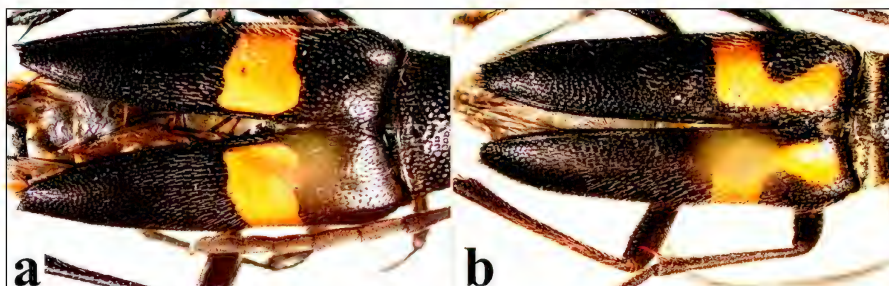
- 94(93'). Elytra at middle of sides and entire venter light reddish, otherwise black (a).....
*Pseudostrangalia cruentata* (Haldeman)
- 94'. Elytra without above coloration; venter generally black or dark reddish.....95



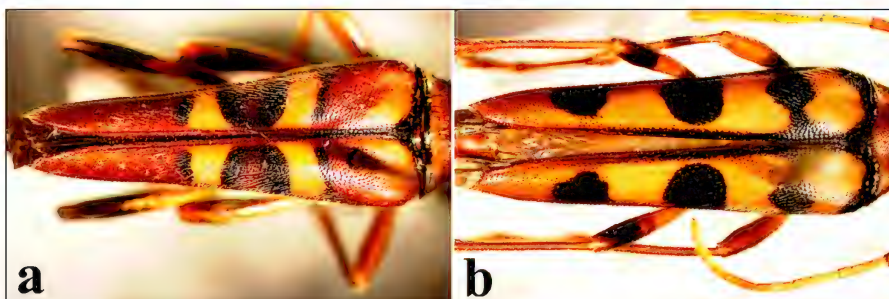
- 95(94'). Completely black except for single yellow to orange macula (either in form of band or right angle) in basal half of elytra.....96
- 95'. Coloration different, elytra often with many maculae.....97

Key

- 96(95). Elytron with single, broad, yellow to orange antemedial transverse band (a) (known only from Florida).....*Typocerus fulvocinctus* Knull
- 96'. Elytron with single right-angle yellow to orange macula at base (b).....*Typocerus lunulatus* (Swederus)



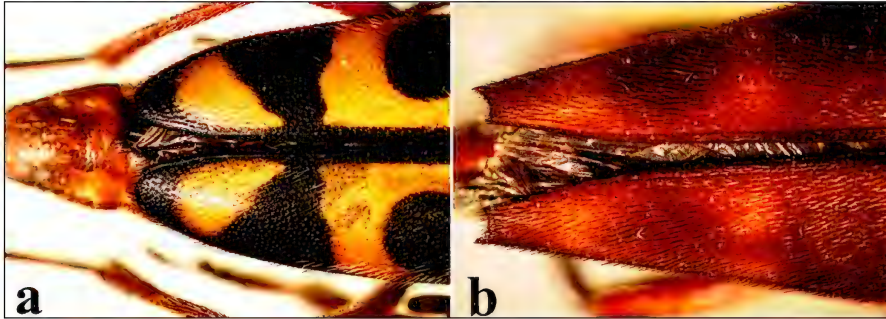
- 97(95'). Pronotum with two elongated maculae around center of disc98
- 97'. Pronotum without maculae around center of disk (if vague maculae present, then not elongate)101
- 98(97). Antennae light colored, pale reddish-brown99
- 98'. Antennae dark100
- 99(98). Elytra each with two transverse yellow maculae (one postmedial, one antemedial), narrowly margined in black (a)*Strangalia strigosa* Newman
- 99'. Elytra with three black maculae separated by broad yellow ground color (b).....*Strangalia luteicornis* (Fabricius)



- 100(98'). Elytra each with two strong black maculae (one medial, one post medial), and a very vague basal macula (a)*Strangalia famelica famelica* Newman
- 100'. Elytra each with only one vague postmedial macula (and rarely, a vague medial macula); otherwise uniformly orange (b)*Strangalia famelica solitaria* Haldeman



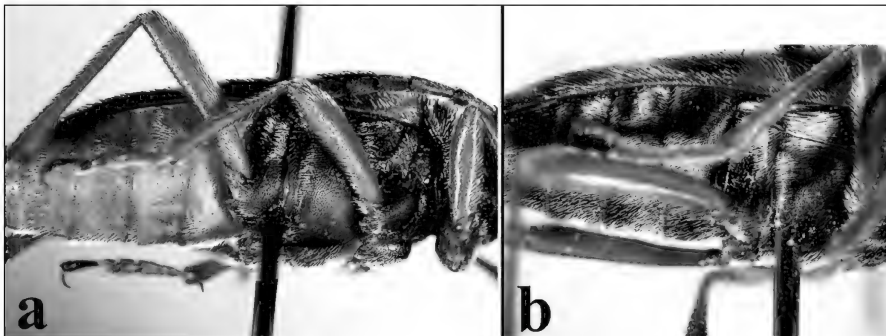
- 101(97')**. Apex of elytra (not just margin edge) black with a distinctly contrasting yellow macula (or ground color) at its anterior border (a). Elytra further ornamented with a series of approximately spaced black or yellow maculae**102**
- 101'**. Apex of elytra reddish-brown, not greatly contrasting with areas around it (b).....**106**



- 102(101)**. Legs uniformly dark. Antennomeres not produced or serrate at apex. Hind tibiae of males with row of denticles (a)..... *Judolia cordifera* (Olivier)
- 102'**. Legs, in most part, reddish brown. Antennomeres serrate. Hind tibiae without row of denticles**103**



- 103(102')**. Metathorax venter of darker (contrasting) color than adjacent abdominal segments (a).....*Typocerus sinuatus* (Newman)
- 103'**. Metathorax venter of similar color to adjacent abdominal segments (b)**104**

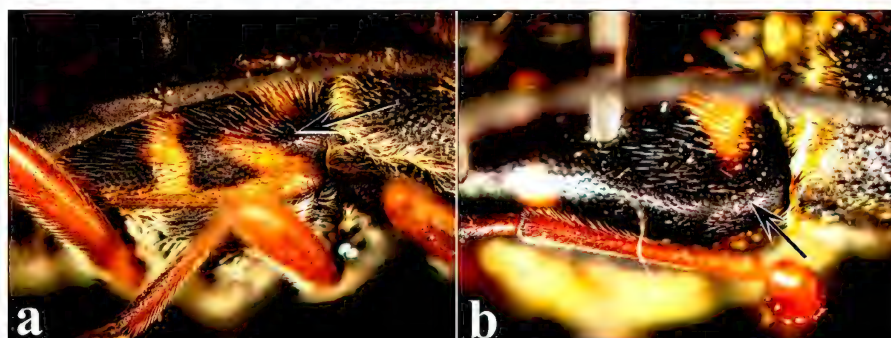


Key

- 104(103’).** Most black maculae not extending to suture, creating the appearance of black maculae on a yellow background (a) *Typocerus octonotatus* (Haldeman)
- 104’.** Most black maculae extending to suture, creating appearance of yellow maculae on a black background **105**



- 105(104’).** A “Z” or “S” shaped yellow macula present around elytral epipleural base and humerus, extending onto disk (occasionally broken at humerus but, if so, maculae close together) (a) *Typocerus zebra* (Olivier)
- 105’.** Elytral epipleural base and humerus with small, widely separate yellow maculae, not forming a “Z” or “S” pattern (b) *Typocerus badius* (Newman)

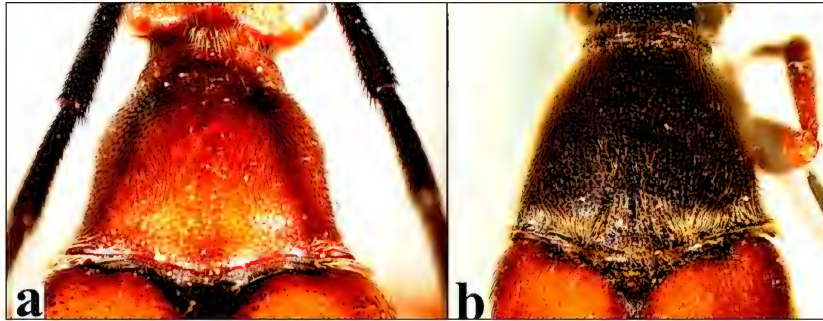


- 106(101’).** Legs uniformly very dark. Elytra very elongate and narrow; without maculae..... *Strangalia acuminata* (Olivier)
- 106’.** Legs uniformly reddish brown, sometimes with part of hind legs piceous. Elytra not extremely narrow and elongate; usually with maculae..... **107**



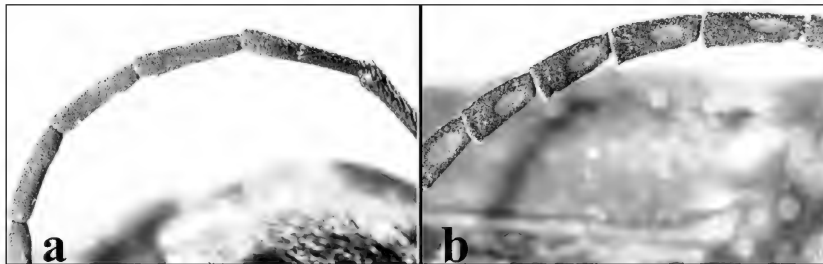
- 107(106')**. Pronotum not covered, particularly on posterior margin, with conspicuous, dense, golden pubescence (no posterior groove present on pronotum) (a) (*Strangalia cambrei* Linsley & Chemsak, known only from Mississippi and a potential variant of *S. sexnotata*, will also key here. It lacks the distinct and separate black maculae on the elytra.).....
.....*Strangalia sexnotata* Haldeman

- 107'**. Pronotum covered, especially on posterior margin, with conspicuous, dense, golden pubescence (posterior groove present on pronotum) (b).....**108**



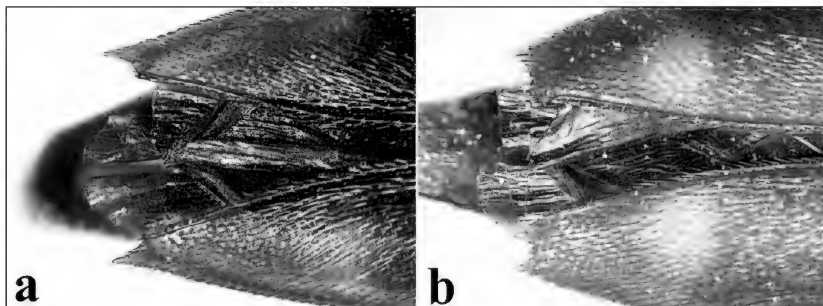
- 108(107')**. Antennae without distinct round or oval poriferous areas (a).....
.....*Typocerus deceptus* Knull

- 108'**. Antennae with distinct round or oval poriferous areas on most antennomeres on outer side (b).....**109**



- 109(108')**. Elytra with suture forming base of pronounced, acute outer spine (a).....
.....*Typocerus acuticauda* Casey

- 109'**. Elytra without strongly produced outer spine; truncate, obliquely truncate, or bidentate (b)
.....*Typocerus velutinus* (Olivier)



- 110(27')**. Elytra abbreviated, exposing much of hindwing (see 111a-b, 112a) **111**

- 110'**. Elytra entire, exposing, at most, only small portion of hind wing.....**117**

Key

111(110). Elytra abruptly attenuate at midpoint, exposing hind wings at middle and apex (a, b).....
..... *Callimoxys sanguinicollis* (Olivier)

111'. Elytra shortened but not abruptly attenuate, exposing hind wings apically.....**112**



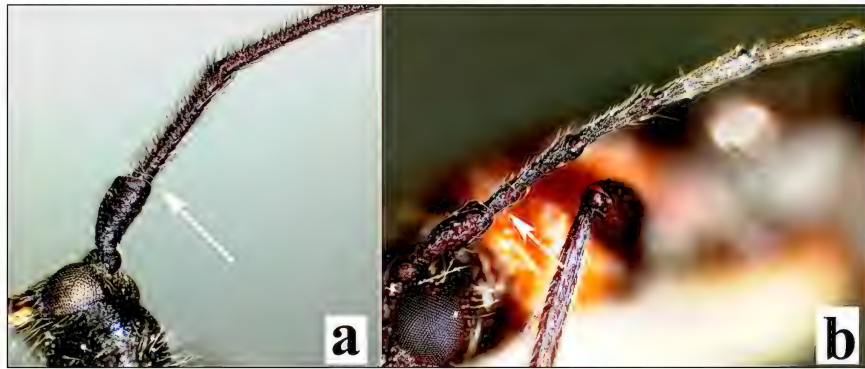
112(111'). Elytra extremely short, much less than one-fourth the length of abdomen (a).....
..... *Necydalis mellita* (Say)

112'. Elytra about one-third to two-thirds length of abdomen.....**113**



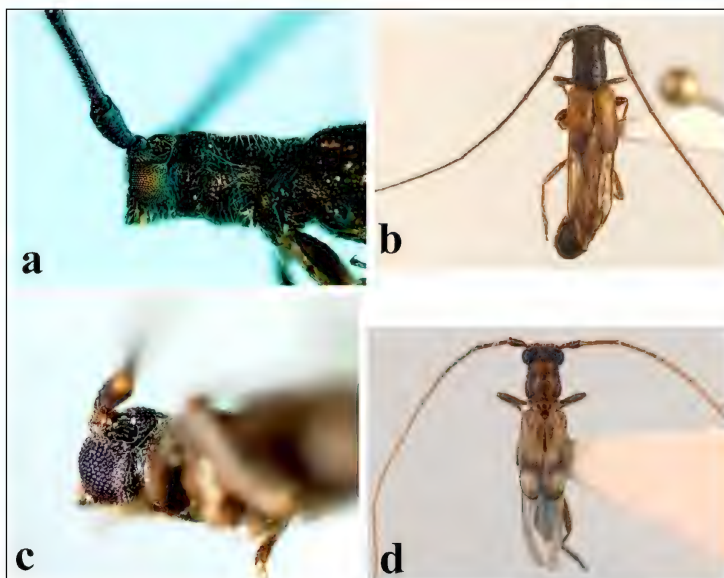
113(112'). Second antennomere very small, less than one-tenth length of third antennomere (a)...**114**

113'. Second antennomere long, at least one-fourth length of third antennomere (b).....**115**



114(113). Upper and lower eye lobes completely separated (a, b)*Tessaropa tenuipes* (Haldeman)

114'. Upper and lower eye lobes touching, connected by one row of facets (c, d).....
..... *Methia necydalea* (Fabricius)



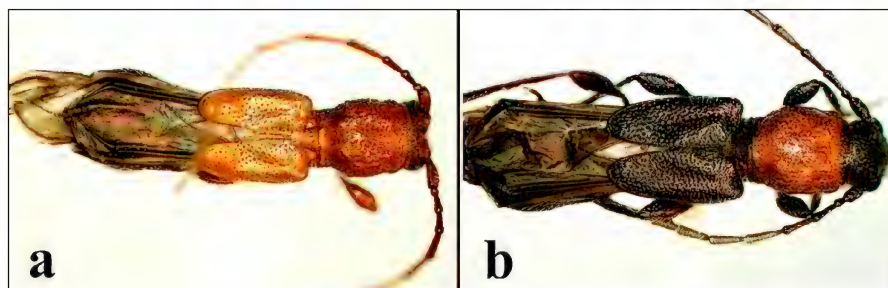
115(113'). Elytra testaceous, margined with black or dark reddish-brown (rarely entirely black); pronotum dark reddish-brown to black (a) *Molorchus bimaculatus bimaculatus* Say

115'. Elytra unicolorous (rufotestaceous or black) **116**



116(115'). Elytra and pronotum of similar color, rufotestaceous (a)
..... *Molorchus bimaculatus semiustus* (Newman)

116'. Elytra black or dark reddish-brown, pronotum lighter, reddish (b)
..... *Molorchus bimaculatus corni* Haldeman



Key

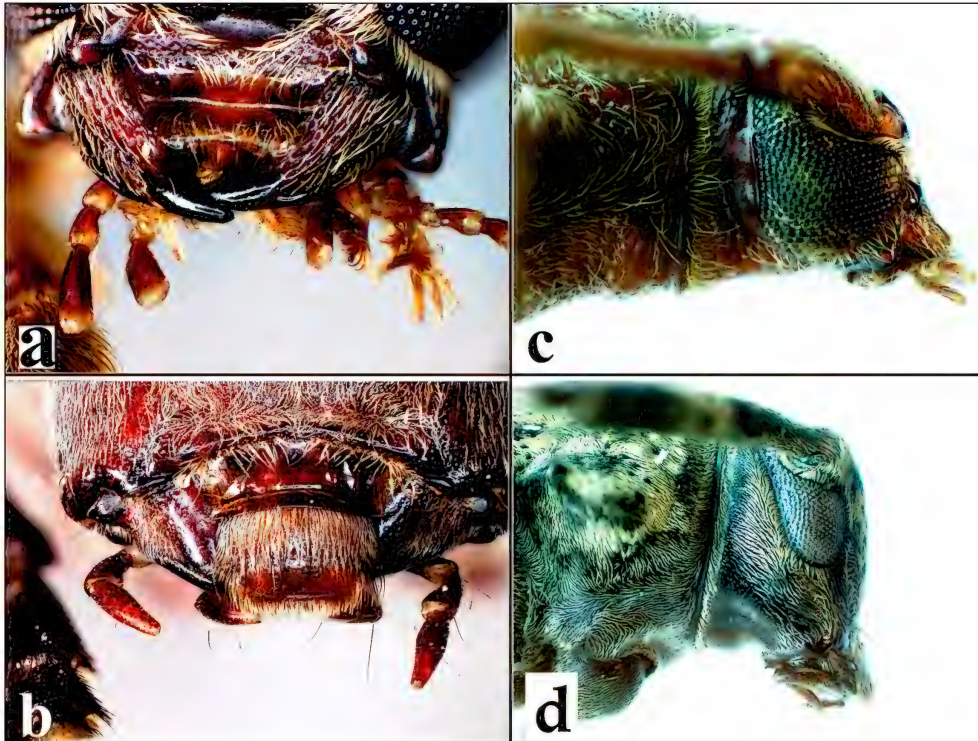
- 117(110').** Elytron with single antemedial transverse or oblique, raised ivory callus.....**118**
- 117'.** Elytron without single, transverse or oblique, raised ivory callus.....**120**
- 118(117).** Pronotum with granulate, without defined longitudinal rugae; ivory callus of elytron... nearly always transverse (a).....***Euderces reichei reichei* LeConte**
- 118'.** Pronotum with distinct, longitudinal rugae; ivory callus of elytron nearly always oblique (see 119a-c).....**119**



- 119(118').** Elytra without distinct white fascia posteriorly. Rugae of pronotum extending to anterior margin. Pronotum without band of pubescence on posterior margin (a, b).....***Euderces picipes* (Fabricius)**
- 119'.** Elytra usually with distinct white fascia posteriorly. Pronotal rugae usually extending to anterior fourth or fifth of pronotum. Pronotum with band of pubescence on posterior margin, extending anteriorly at middle to a sharp point (c).....***Euderces pini* (Olivier)**

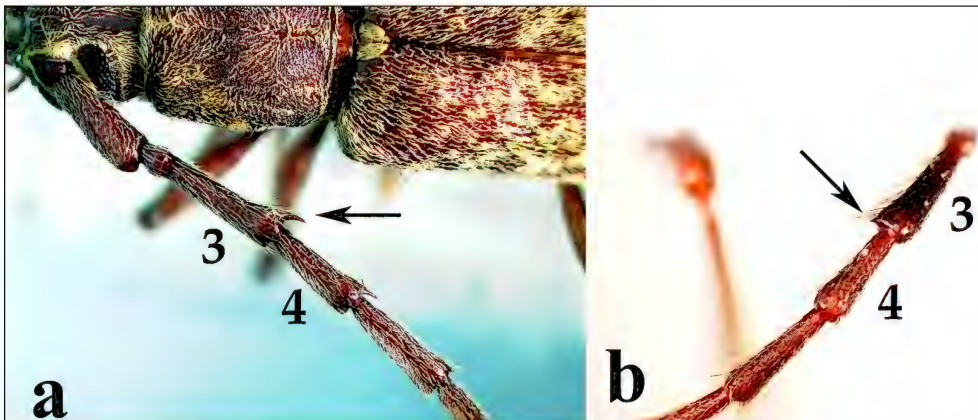


- 120(117').** Terminal maxillary and labial palpal segment broad and truncate at apex (a). Mouthparts usually produced obliquely forward such that head doesn't have a flat, vertical appearance from front (c) (Most Cerambycinae, *Atimia*, *Michthisoma*).....**121**
- 120'.** Terminal maxillary and labial palpal segment pointed at apex (b). Mouthparts usually produced downward and head has a flat appearance from the front or has the upper head around the antennal tubercles bulging forward (d) (Lamiinae)**264**



121(120). Antennae with mesal spine on apex of third antennomere (and almost always 2-5 more antennomeres, at least) (a) (*Elaphidiini*, plus *Megacyllene*, *Glycobius*, *Dryobius*, *Cyrtophorus*)**122**

121'. Antennae without mesal spines. Specimens occasionally with an acute dentiform projection at apex of third antennomere (b), but not a spine (note: species with ambiguous states are treated in both ways).....**155**

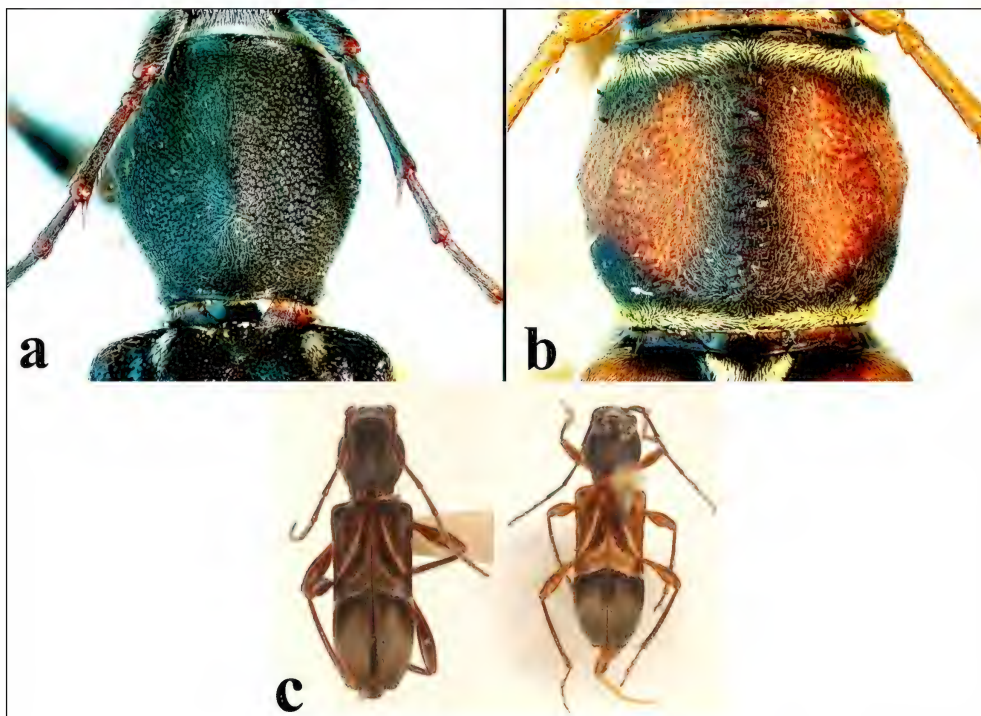


122(121). Elytron with well delineated transverse or oblique bands of white, yellow, or orange pubescence, extending completely across elytron**123**

122'. Elytron without pubescent bands (although it may have pubescence in form of spots or maculae).....**128**

Key

- 123(122).** Pronotum without bands of pubescence (a). Elytron with narrow white fasciae only in anterior half (c) *Cyrtophorus verrucosus* (Olivier)
- 123'.** Pronotum with bands of pubescence (sometimes divided at middle of disk) (b). Elytron with white, yellow, or orange bands of pubescence throughout **124**



- 124(123').** Legs covered in dense, bright yellow pubescence (obscuring nearly all surface). Bands of pronotal pubescence broadly divided on disk (a) *Glycobius speciosus* (Say)
- 124'.** Legs mostly glabrous. Bands of pronotal pubescence mostly complete across disk **125**

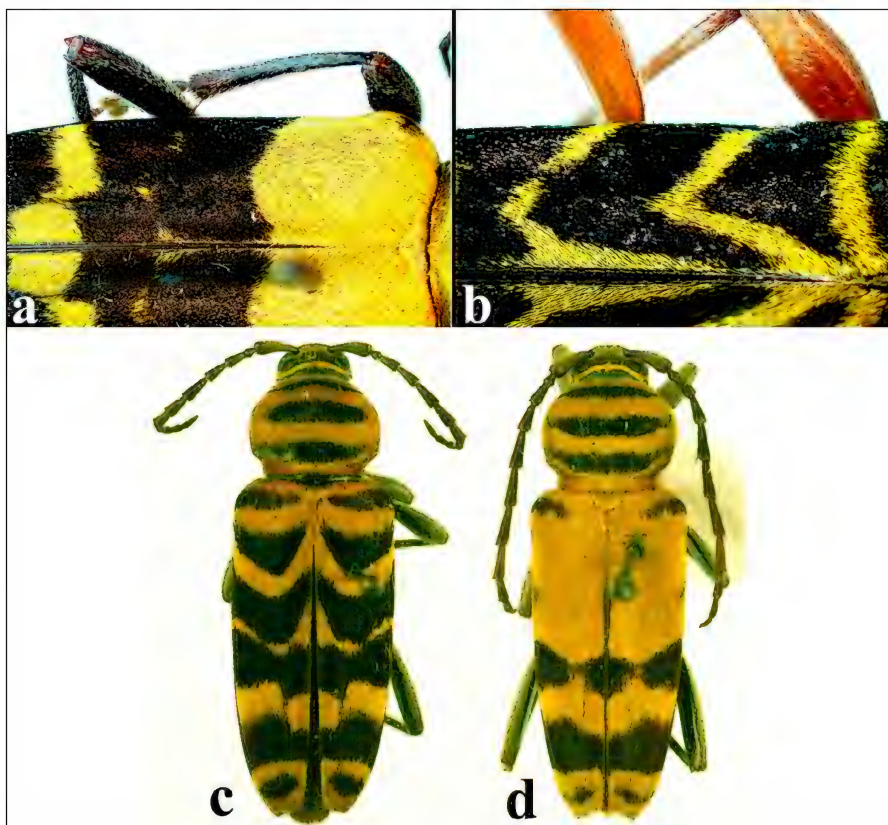


- 125(124').** Pronotum with 2 broad bands of yellow pubescence (a). Elytron with 4 evenly sized and spaced bands of yellow pubescence (c). Antennae, especially of males, longer than body by at least 2 antennomeres *Dryobius sexnotatus* Linsley
- 125'.** Pronotum with 3-4 bands of yellow or white pubescence (b). Elytron with pubescent bands of uneven size, shape, and placement. Antennae at most as long as the body **126**



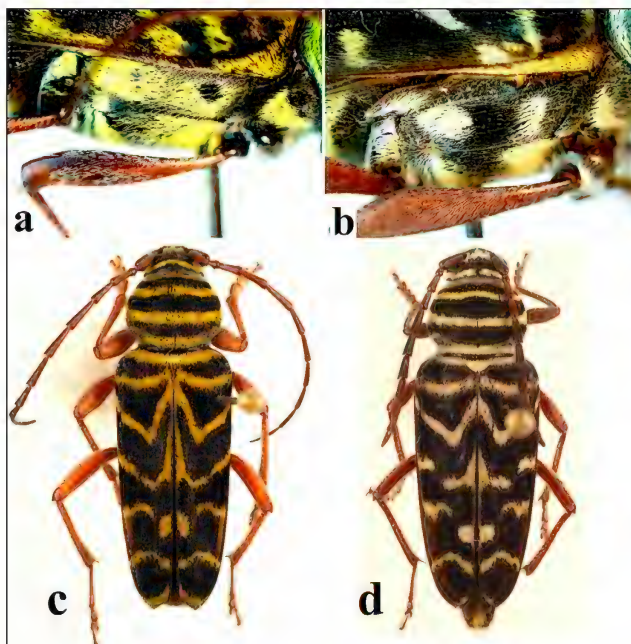
126(125). Most elytral bands thicker than femora; legs very dark brown or black (a); habitus as in (c & d).....*Megacyllene decora* (Olivier)

126'. Elytral bands very narrow, distinctly thinner than femora; legs reddish (b)**127**

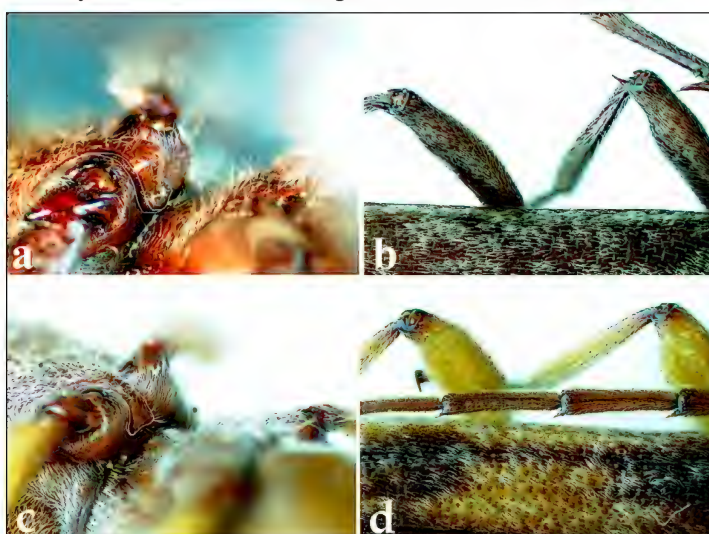


Key

- 127(126).** Metepisternum nearly completely covered in white or yellow pubescence (a); habitus as in (c) *Megacyllene robiniae* (Forster)
- 127'.** Metepisternum with white or yellow pubescence divided at middle (b); habitus as in (d) *Megacyllene caryae* (Gahan)

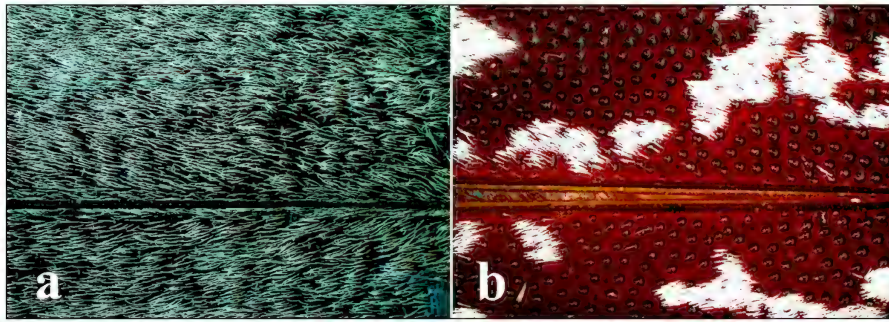


- 128(122').** Prosternal process straight and level to posterior margin of procoxae, and then abruptly vertical (a). Mesofemoral and metafemoral apices with spine or prominent dentate projection mesally (b). Elytral apices prominently bispinose. Several antennomeres usually bispinose. Spine of third antennomere usually very strong and in most specimens at least one-third length of fourth antennomere (*Elaphidion*) **129**
- 128'.** Prosternal process gradually declivous between procoxae (c). Mesofemora and metafemora without spines mesally, only dentiform in few species (d). Elytral apices rounded to moderately bispinose. Antennal spines usually not prominent and usually unispinose; spine of third antennomere usually less than one-third length of fourth antennomere **133**



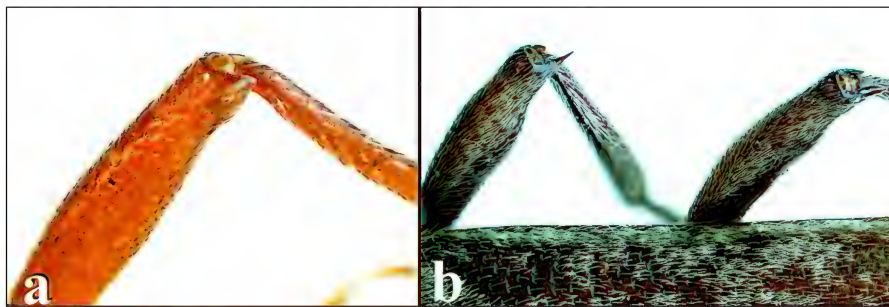
129(128). Elytral pubescence mostly uniform without large, glabrous, shiny regions (a)**130**

129'. Elytral pubescence condensed in irregular patches exposing large, glabrous, shiny regions (b).....**132**



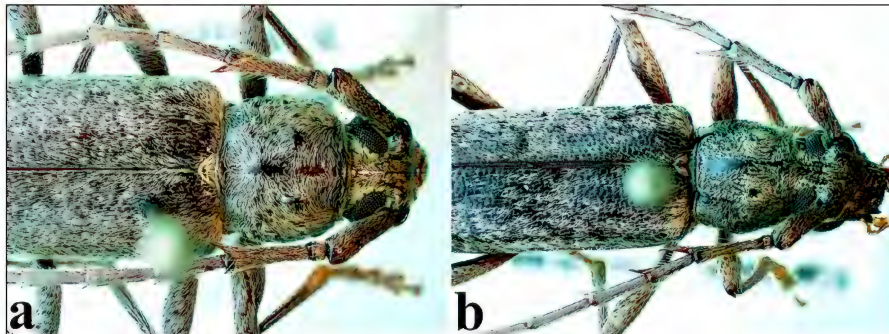
130(129). Mesofemoral and metafemoral apices mesally dentiform (a) (known only from Florida)*Elaphidion knulli* Linsley

130'. Mesofemoral and metafemoral apices mesally spinose (b).....**131**



131(130'). Pubescence very dense, particularly on venter, hiding much of integument. Spine of third antennomere less than one-third length of fourth antennomere (a). Spined antennomeres usually bispinose (known only from Florida) *Elaphidion tectum* LeConte

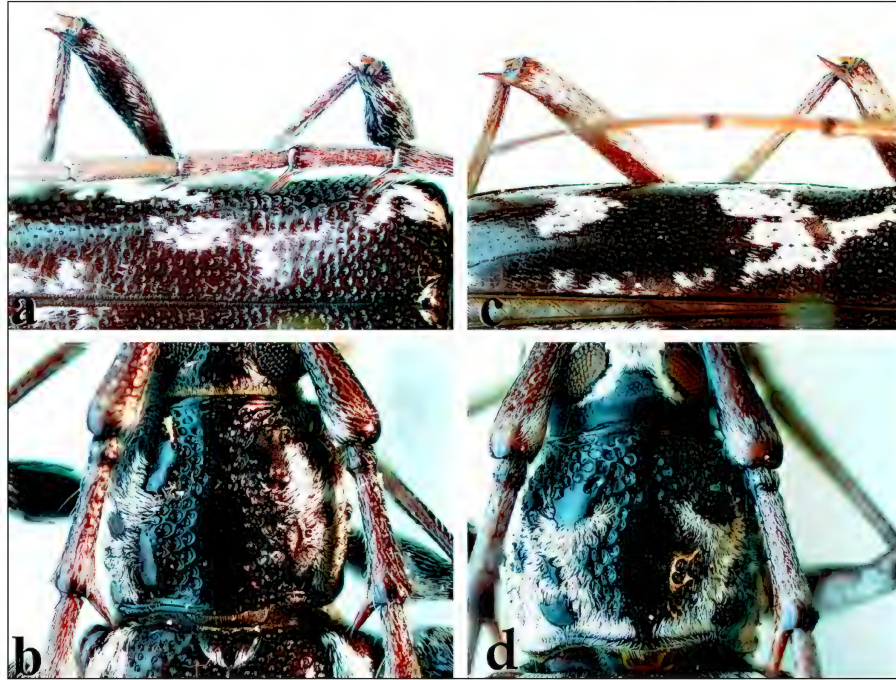
131'. Pubescence dense, but with numerous small patches of exposed integument, particularly on abdominal venter. Spine of third antennomere about one-half length of fourth antennomere in most specimens (b). Spined antennomeres usually unispinose *Elaphidion mucronatum* (Say)



Key

132(129'). Integument color of legs dark brown (same color as integument elsewhere). Femora mostly glabrous, with scattered broken patches or isolated white hairs. Outer femoral spines usually strong on meso- and metafemora (a). White pubescence of pronotum not dense, not concealing punctures (b) (known only from Florida in the US) *Elaphidion cryptum* **Linsley**

132'. Integument color of legs reddish brown (lighter in color than integument elsewhere). Femora mostly covered in closely spaced patches of white pubescence. Outer femoral spines usually weak on meso- and metafemora (c). White pubescence of pronotum very dense around lateral margins of peripheral calli, hiding punctures (d) (known only from Florida in the US) *Elaphidion irroratum* (**Linnaeus**)

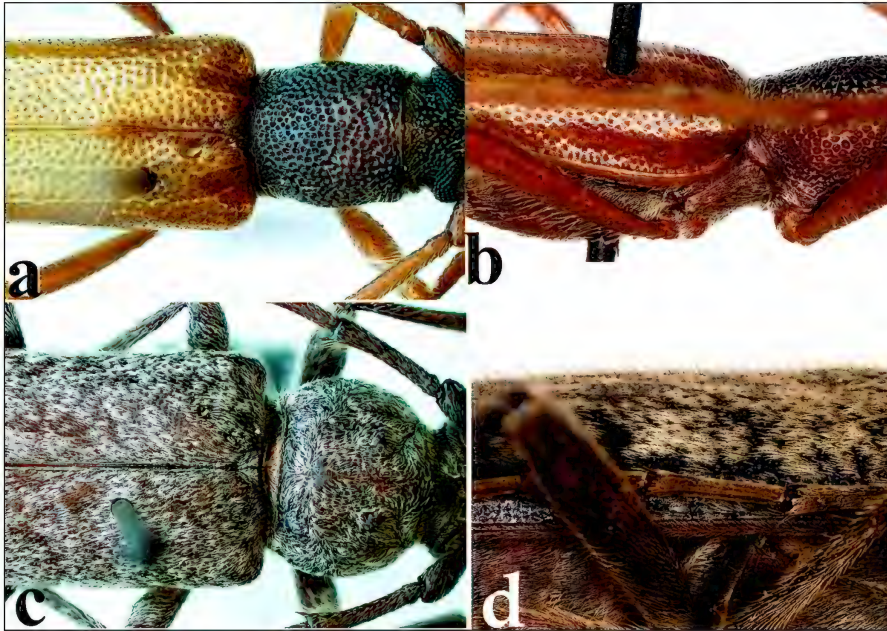


133(128'). Integument testaceous, mostly glabrous, but with distinct patches of very dense, bright white pubescence on head, pronotum and elytra (a) (known only from Florida in the US) *Linsleyonides albomaculatus* (**Champlain and Knull**)

133'. Integument color variable, pubescence in different arrangement, never with dense patches of bright white pubescence **134**



- 134(133').** Integument mostly testaceous to light reddish brown. Only scattered erect hairs (always separate from each other) present on pronotum and elytron, not obscuring any of surface (a, b)**135**
- 134'.** Integument mostly dark reddish-brown to black. Pubescence either patchy and more dense in places on pronotum and/or elytra (but these scattered, dense portions may be very sparsely distributed), or uniformly dense, partially obscuring surface (c, d) (see also *147a-b*).....**141**



- 135(134).** Pronotum about as broad as long or broader (see *134b* above)**136**
- 135'.** Pronotum distinctly longer than broad (see *134a* above & *137a* below)**137**
- 136(135).** Large, robust longhorn (most > 3 cm). Pronotum without punctures. Spines of antennae very small, appearing dentiform on 3 and 4 mesally (a, photo courtesy Roy Morris) (known only from Florida)..... *Romulus globosus* Knull
- 136'.** Small longhorn (most 1-2 cm). Pronotum with dense punctures. Spines of antennae moderately developed on 3 and 4 mesally (b)*Anelaphus moestus* (LeConte)



Key

- 137(135').** Pronotum with lateral projections at middle and a strong posterior constriction. Femora pedunculate/clavate (a) (known only from Florida).....
.....*Stizocera floridana* Linsley



- 137'.** Pronotum without lateral projections, parallel sided or gradually swollen at middle. Femora gradually enlarged, neither clavate nor pedunculate.....**138**

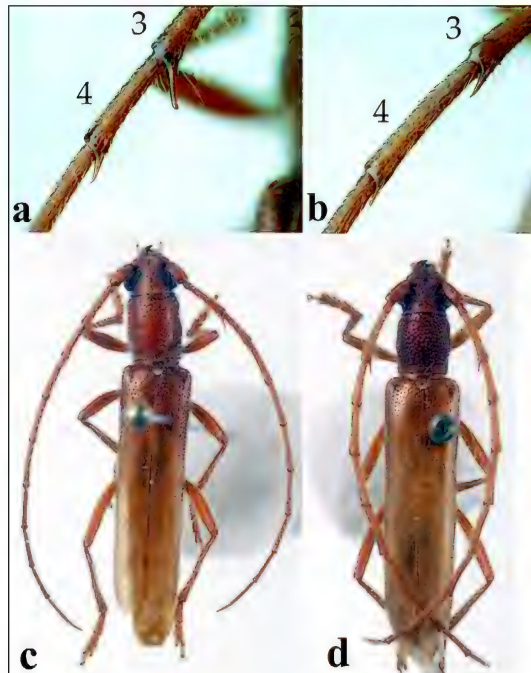
- 138(137').** Pronotum with dense, deep punctures (a) (*Aneflomorpha*)**139**

- 138'.** Pronotum with sparse, shallow punctures (b) (*Psyrassa*).....**140**

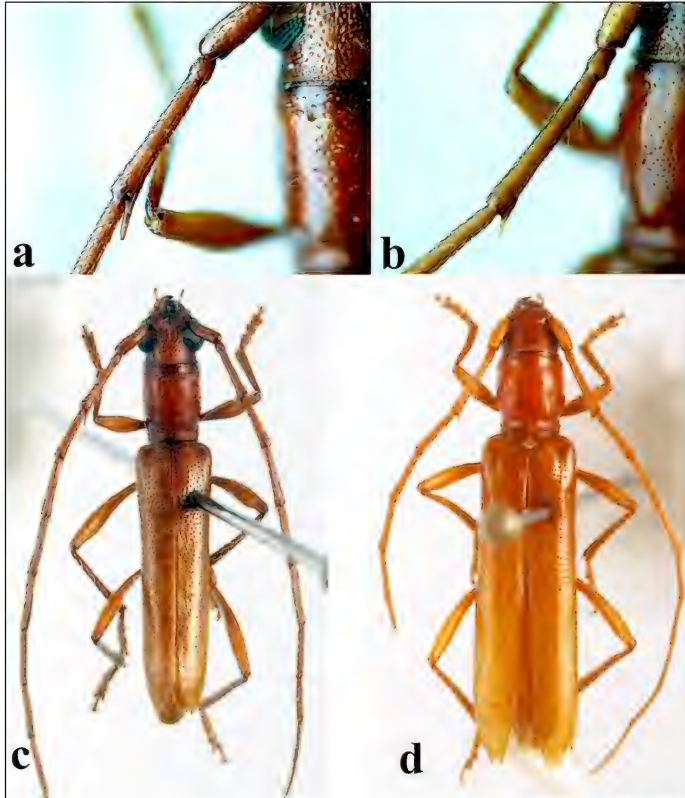


- 139 (138).** Spine of third antennomere almost half length of fourth antennomere; somewhat blunt at apex (a). Pronotum only slightly darker than remaining integument (c).....
.....*Aneflomorpha delongi* (Champlain & Knull)

- 139'.** Spine of third antennomere about one-fourth length of fourth antennomere or less; usually acute at apex (b). Pronotum distinctly darker than remaining integument (d).....
.....*Aneflomorpha subpubescens* (LeConte)



- 140(138')**. Spine at apex of third antennomere much longer than second antennomere (a).
 Scutellum without dense white pubescence (c) *Psyrassa pertenuis* (Casey)
- 140'**. Spine at apex of third antennomere about length of second antennomere or shorter (b).
 Scutellum with dense, white pubescence (d) *Psyrassa unicolor* (Randall)

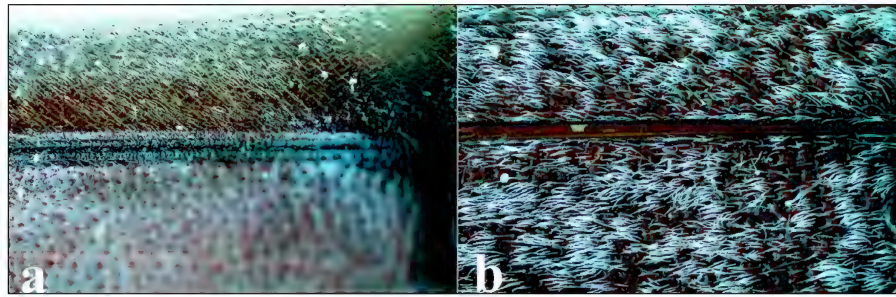


- 141(134')**. Prothorax red or orange except for black circular region at center of disk (rarely entirely red or orange), remainder of body and appendages black (or rarely dark reddish brown)
 *Stenosphenus notatus* (Olivier)
- 141'**. Prothorax light to dark reddish brown, not of contrasting color to remainder of body **142**



Key

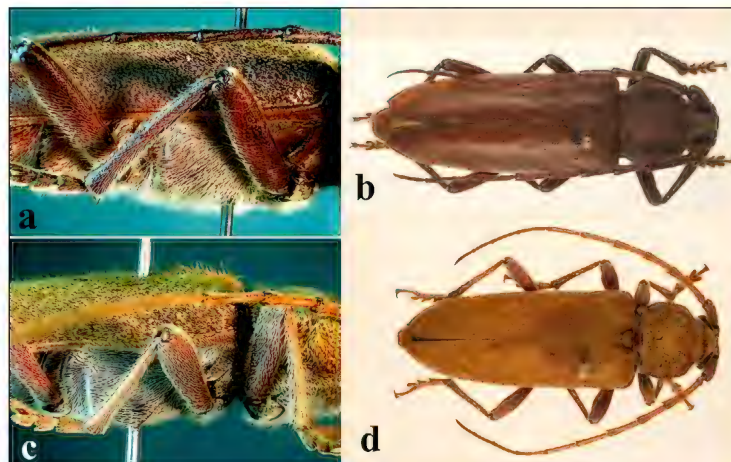
- 142(141')**. Discounting rubbed areas, pubescence of elytra uniform, not appearing splotchy or patterned (a)**143**
- 142'**. Pubescence of elytra irregular, with numerous dense and sparse areas giving a splotchy or patterned appearance (b).....**145**



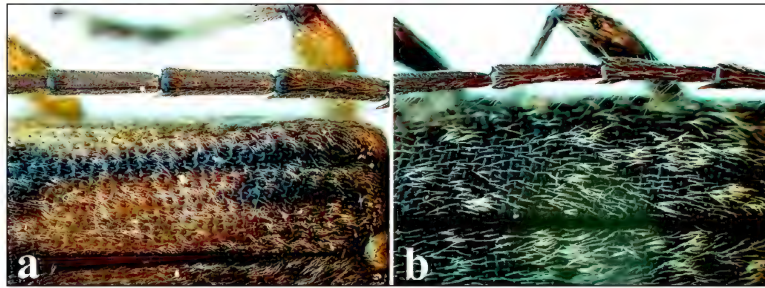
- 143(142)**. Large, robust beetles, greater than 2 cm in length. Elytral suture with moderate to strong spine**144**
- 143'**. Small to moderate sized beetle, about 1 cm in length. Elytral suture without spine, dentiform or angulate (a)
*Anelaphus moestus* (LeConte) (includes *Anelaphus moestus pinorum* (Casey))



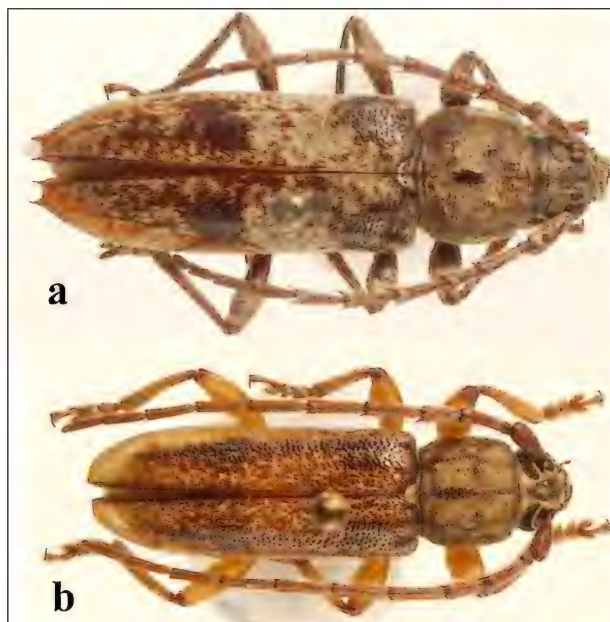
- 144(143)**. Body and appendages very dark reddish brown. Ventral pubescence mostly translucent with slight golden sheen (a, b). Last ventral sternite of females with a deep notch at apex*Enaphalodes hispicornis* (Linnaeus)
- 144'**. Body and appendages light reddish brown. Ventral pubescence mostly white and not translucent, distinctly different color from dorsal pubescence (c, d). Last ventral sternite of females with a very shallow notch at apex (known only from Florida).....
*Enaphalodes archboldi* Lingafelter & Chemsak



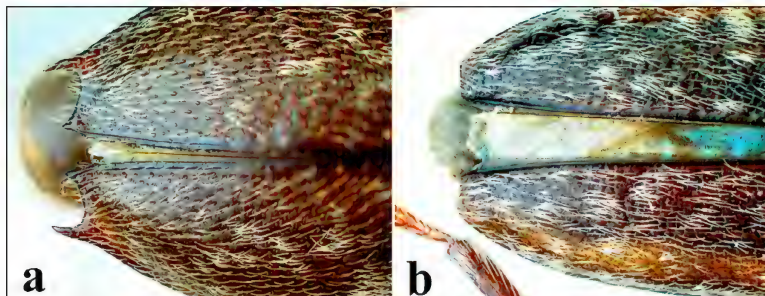
- 145(142')**. Elytral integument with two colors (testaceous or reddish brown & dark brown), giving a maculate or banded appearance (a). Antennae with strong dorsal carina (a).....**146**
- 145'**. Elytral integument with one color (light to dark reddish brown). Integument without maculae or banded appearance (although pubescence may form vague vittae or splotches) (b). Antennae with vague or absent dorsal carina.....**147**



- 146(145)**. Elytral apices bispinose (a) (known only from Florida in the US).....
.....*Anelaphus mutatum* (Gahan)
- 146'**. Elytra without apical spines; rounded to suture (b) (known only from Florida in the US).
.....*Anelaphus cinereus* (Olivier)

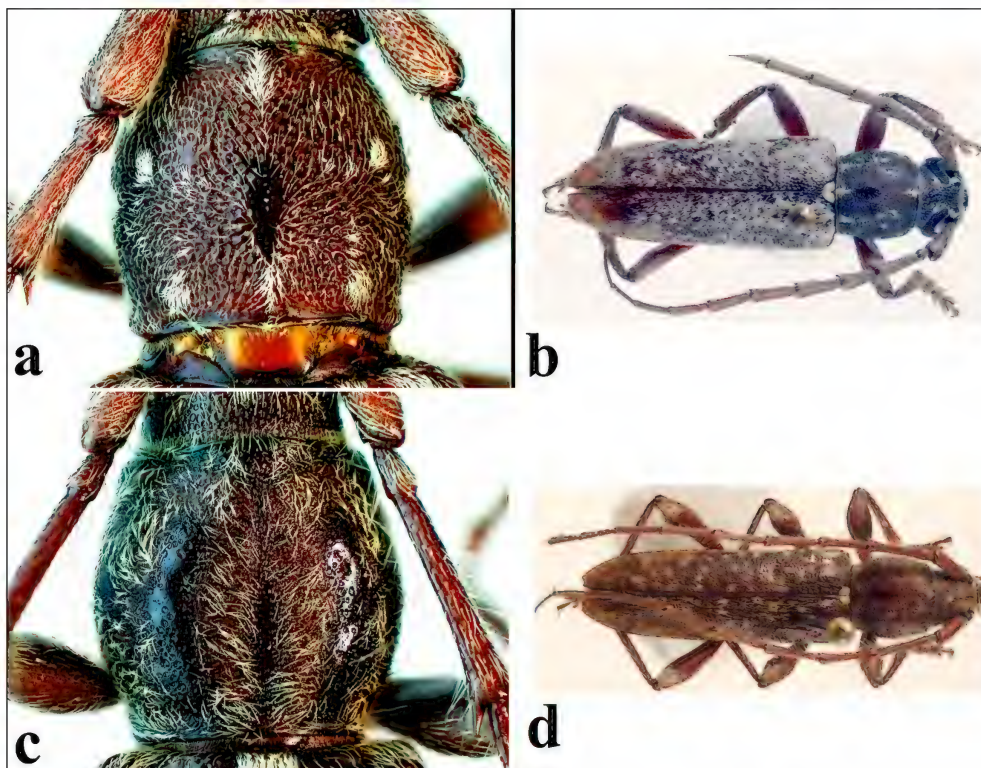


- 147(145')**. Elytral apices moderately to strongly bispinose (rarely with outer spine missing) (a)...**149**
- 147'**. Elytral apices truncate to weakly bidentate (b)**148**

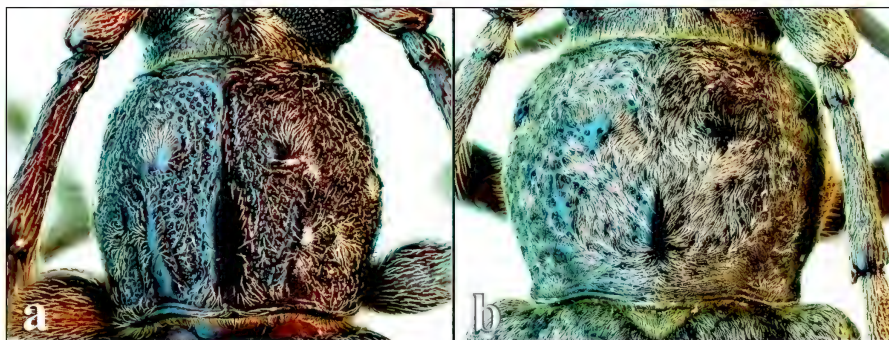


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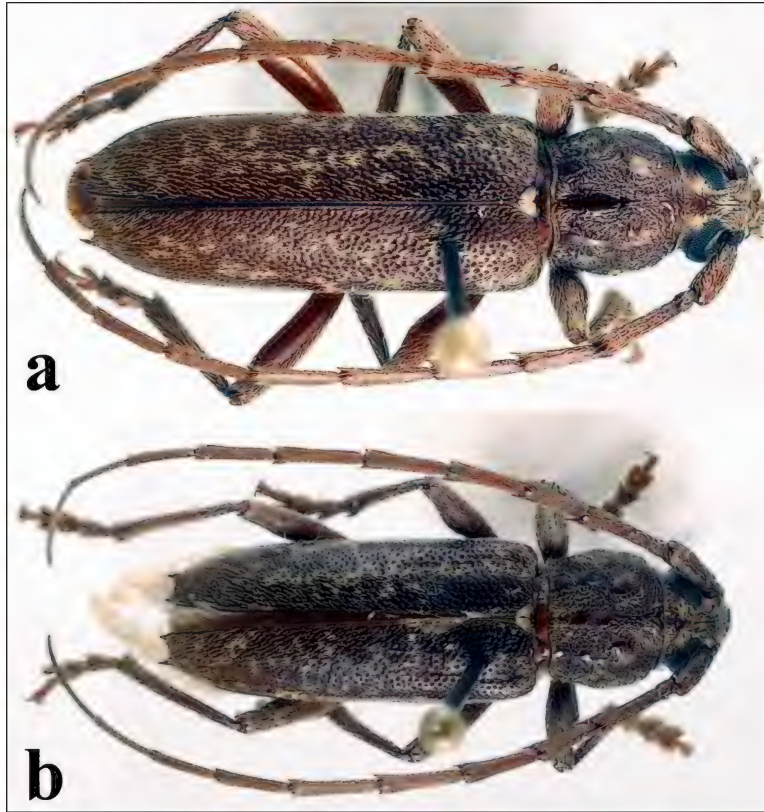
- 148(147').** Pronotum with 3-8 small patches of very dense, white pubescence (a). Antennal tubercles and eye margin with very dense, white pubescence (b) *Anelaphus inermis* (Newman)
- 148'.** Pronotum without defined patches of very dense, white, yellow, or tawny pubescence (b). Antennal tubercles and eye margin without distinctly denser, white pubescence from surrounding areas (d) *Anelaphus pumilus* (Newman).



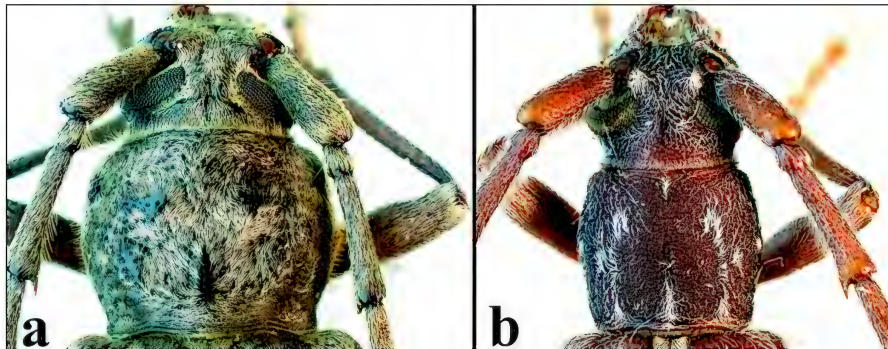
- 149(147).** Pronotum with strong middle glabrous callus narrowing anteriorly, spanning about two thirds length of pronotum. Middle callus surrounded by four distinct, but variably pronounced round calli (occasionally these lateral calli on either side of the middle callus connect, making essentially three long calli (a) (*Parelaphidion*) **150**
- 149'.** Pronotum with weak and/or short middle glabrous callus, spanning less than half length of pronotum. Additional calli indistinct, if present at all (b)..... **151**



- 150(149).** If male (last antennomere longer than penultimate; last ventrite subtruncate) then antennae extending less than two antennomeres beyond elytral apex. If female (last antennomere shorter or subequal to penultimate; last ventrite rounded) then antennae reaching about third abdominal segment (a, male) *Parelaphidion incertum* (Newman)
- 150'.** If male, then antennae surpassing apices of elytra by about three antennomeres. If female, then antennae about as long as body (b, male) *Parelaphidion aspersum* (Haldeman)

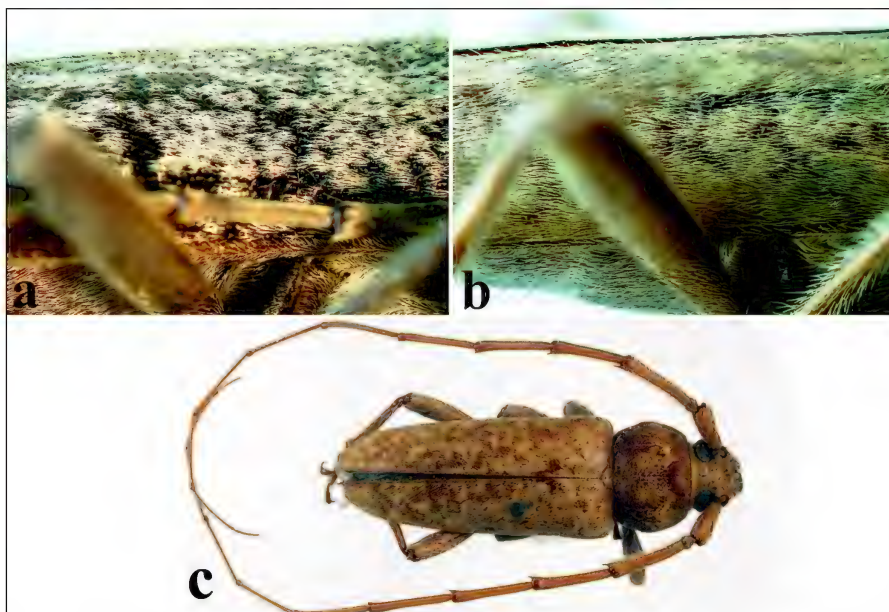


- 151(149').** Large, robust species, over 0.5 cm broad (usually about 7 mm). Pronotum inflated at middle, much wider than head (a) **152**
- 151'.** Smaller, narrow and elongate species, less than 4 mm broad. Pronotum parallel-sided or weakly expanded at middle, about equal to width of head (b) **154**

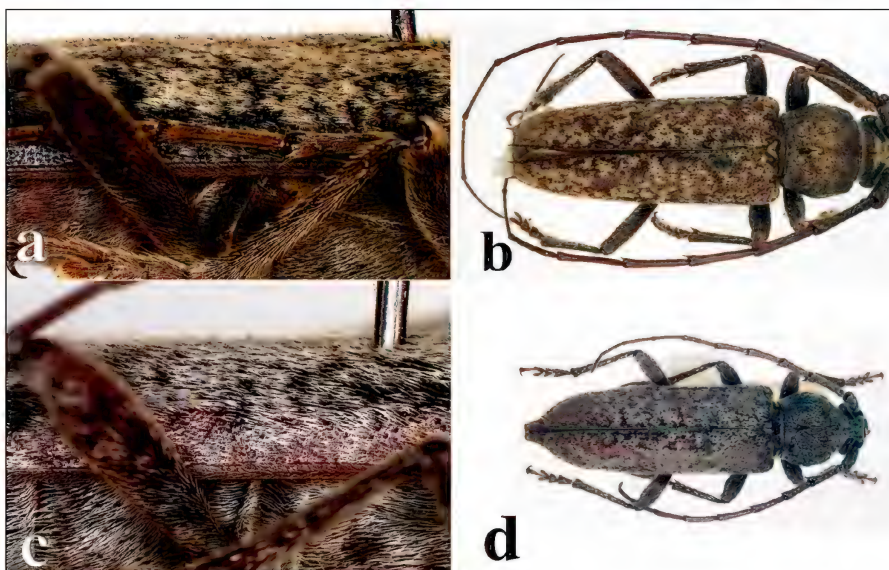


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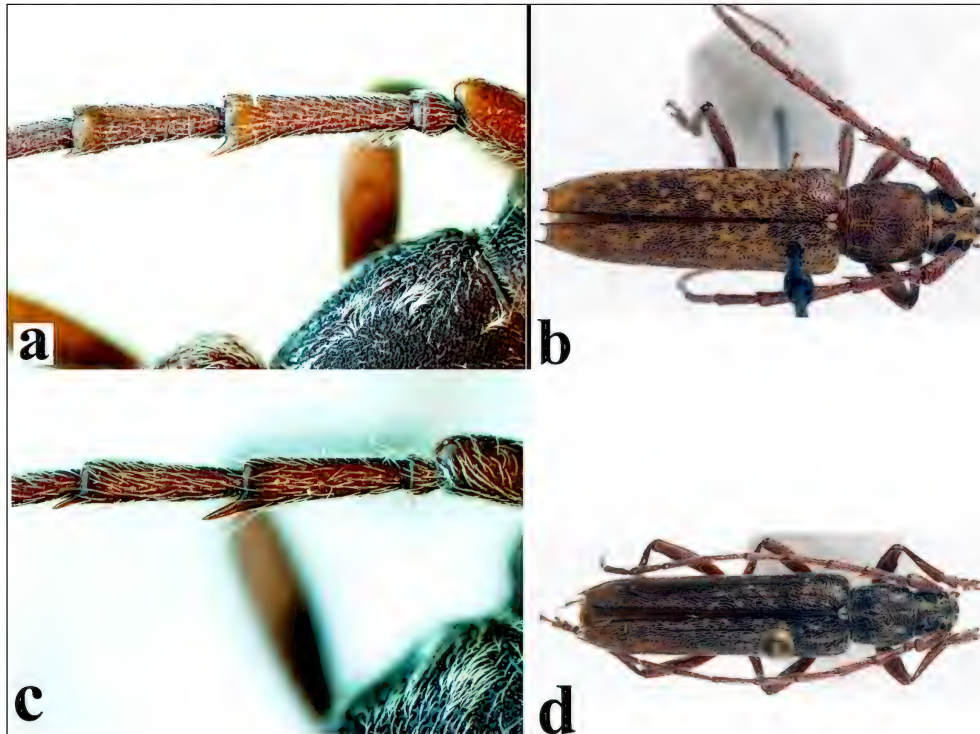
- 152(151).** Elytra with white or off-white appressed pubescence and light to dark brown ground color (rarely reddish-brown); longer erect to suberect setae present (a). Last abdominal sternite of females with deep or shallow notch at apex**153**
- 152'.** Elytra with fulvous appressed pubescence and reddish or light brown ground color without erect setae (except a few along suture and apical third) (b, c). Last abdominal sternite of females with very shallow notch at apex *Enaphalodes rufulus* (Haldeman)



- 153(152).** Erect setae much more abundant (a). Last abdominal sternite of female deeply notched at apex. Elytra with diffuse patches of off-white pubescence (b).. *Enaphalodes atomarius* (Drury)
- 153'.** Erect setae more sparse (c). Last abdominal sternite of female with very shallow notch at apex. Elytra with diffuse patches of white or off-white pubescence (d).....
.....*Enaphalodes cortiphagus* (Craighead)



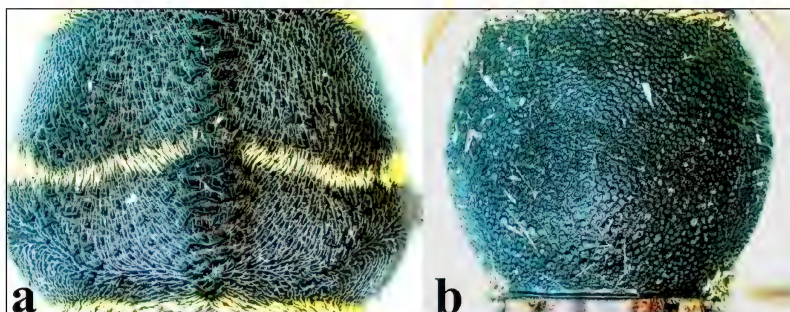
- 154(151')**. Antennomere three distinctly longer than antennomere four (a); habitus as in (b) (note: this species is notoriously difficult to distinguish from *A. parallelus*).....
 *Anelaphus villosus* (Fabricius)
- 154'**. Antennomere three subequal to antennomere four (c); habitus as in (d).....
 *Anelaphus parallelus* (Newman)



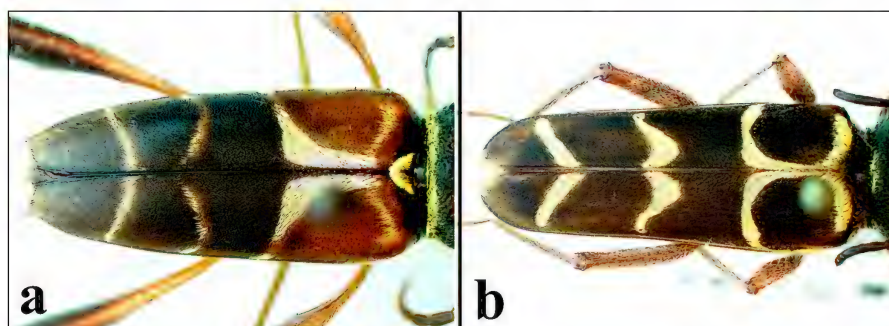
- 155(121')**. Pronotum with at least one conspicuous transverse band of yellow or white pubescence. Elytra with white, yellow, or orange bands of pubescence throughout (e.g., see 123b & 125a-b).....
 **156**
- 155'**. Pronotum without complete, transverse bands of pubescence. Elytra with or without bands of pubescence.....
 **166**
- 156(155)**. Pronotum with very narrow pubescent bands restricted to the anterior (at least) and some times posterior margins (e.g., see 123b).....
 **157**
- 156'**. Pronotum with pubescent bands wide or not restricted to the extreme anterior and posterior margins (e.g., see 125a-b).....
 **160**

Key

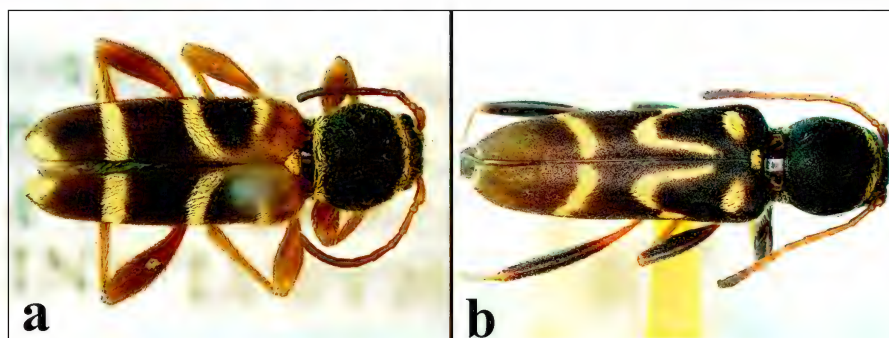
- 157(156).** Middle of pronotal disk with a series of short, transverse ridges (a). Hind femora usually with conspicuous apical projections or spines**158**
- 157'.** Middle of pronotal disk without transverse ridges (b). Hind femora without spines or apical projections**159**



- 158(157).** Elytron with bold yellow to white band of pubescence that extends from outside edge just antemedially to suture in a straight line and along suture to scutellum in a straight line (a). Epipleuron to base of elytron without pubescent fascia*Neoclytus mucronatus* (Fabricius)
- 158'.** Elytron with bold yellow to white band of pubescence that extends in a nearly complete circular band from scutellum across base, along epipleuron edge to anterior one-third, and across to suture, reconnecting to scutellum (b) *Neoclytus caprea* (Say)



- 159(157').** Elytral apex with fascia of yellow pubescence. Pronotum with anterior and posterior margins lined with yellow fascia of pubescence (a)*Clytus marginicollis* Castelnau & Gory
- 159'.** Elytral apex without fascia of pubescence. Pronotum with anterior margin only lined with yellow or white fascia of pubescence (b) *Clytus ruricola* (Olivier)



160(156'). Legs covered in dense, bright yellow pubescence (obscuring nearly all surface). Bands of pronotal pubescence broadly divided on disk (a).....*Glycobius speciosus* (Say)

160'. Legs mostly glabrous. Bands of pronotal pubescence mostly complete across disk (see *125a-b*)**161**



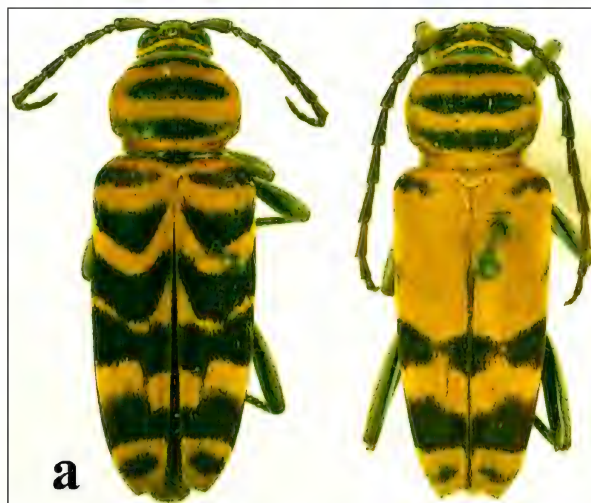
161(160'). Pronotum with 2 broad bands of yellow pubescence (see *125a*). Elytron with 4 evenly sized and spaced bands of yellow pubescence (see *125c*). Antennae, especially of males, longer than body by at least 2 antennomeres *Dryobius sexnotatus* Linsley

161'. Pronotum with 3-4 bands of yellow or white pubescence (a). Elytron with pubescent bands of uneven size, shape, and placement. Antennae at most as long as the body**162**



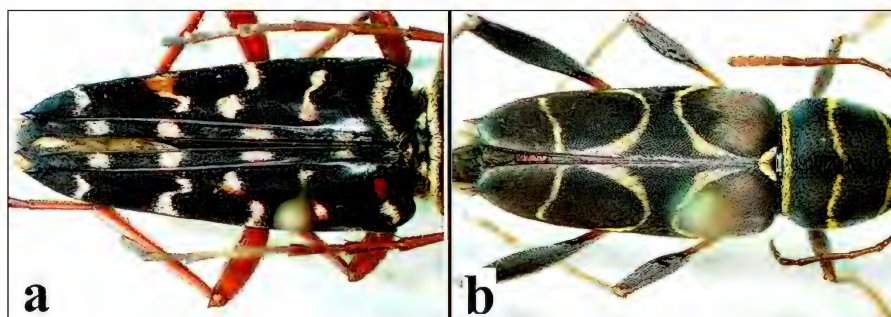
162(161'). Elytral bands very narrow, distinctly thinner than femora. Legs (at least tibiae and tarsi) reddish (see *126b*)**163**

162'. Most elytral bands thicker than femora. Legs very dark brown or black (a).....*Megacyllene decora* (Olivier)

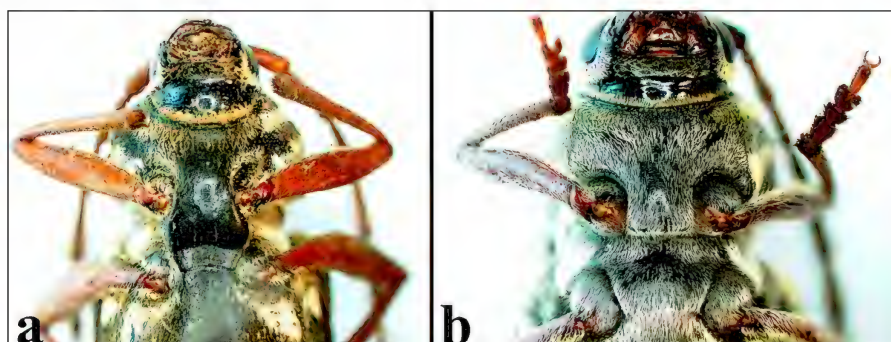


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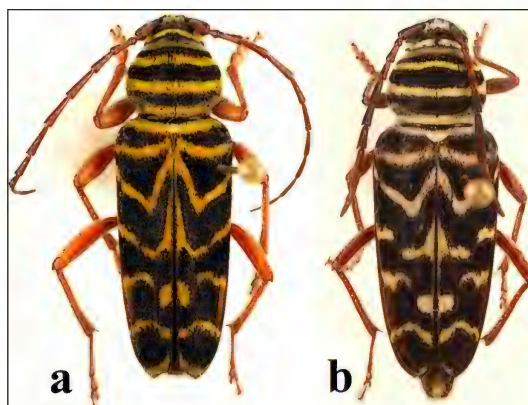
- 163(162).** Sutural one-third of elytron with distinct, abrupt depression margined by a slight carina
(a). Middle of pronotal disk without transverse ridges or bumps. Elytra with at least 5 narrow
bands (sometimes broken into spots) of yellow or white pubescence (a)**164**
- 163'.** Elytron without sutural depression or carina (b). Middle of pronotal disk with series of
transverse ridges or bumps. Elytron with, at most, four narrow fasciae of pubescence (b).....
.....*Neoclytus scutellaris* (Olivier)



- 164(163).** Prosternal process much broader at apex and with corners rounded; projecting well be-
yond posterior margin of procoxae. Prosternal process at apex nearly as wide as both procoxae
together (a) *Placosternus difficilis* (Chevrolat)
- 164'.** Prosternal process only slightly broader at apex and with sharp corners; not projecting
much beyond posterior margin of procoxae. Prosternal process about as wide as 1.5 coxae, or
narrower (b)**165**



- 165(164').** Metepisternum nearly completely covered in white or yellow pubescence (a)
.....*Megacyllene robiniae* (Forster)
- 165'.** Metepisternum with white or yellow pubescence divided at middle (b).....
.....*Megacyllene caryae* (Gahan)



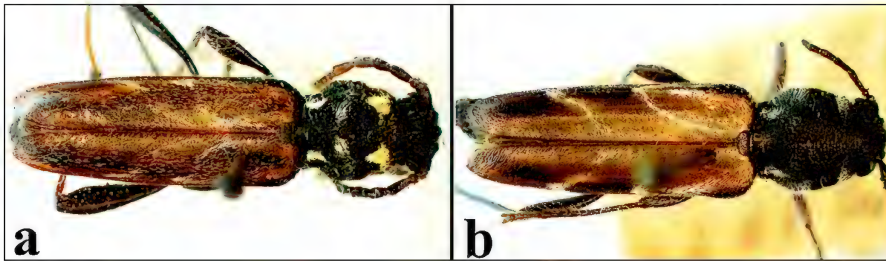
- 166(155')**. Front of head with carinae extending from antennal tubercle straight to frontal margin. Middle of frons with mostly glabrous, raised region bordered by variably developed carinae, often forming a "V" or "U" shape (a). Antennae short, at most reaching only to middle of elytra (*Xylotrechus*).....**167**
- 166'**. Front of head without distinct carinae and swelling (b). Antennae of variable length.....**175**



- 167(166)**. Elytra testaceous, much lighter than pronotum.....**168**
- 167'**. Elytra reddish brown or very dark brown, of similar color to pronotum**169**

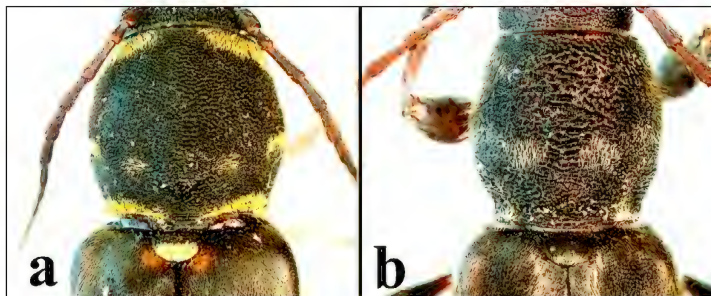
- 168(167)**. Pronotum with white or yellow anterior and posterior spots, usually bold (a). Elytron with anterior and antemedial white to yellow narrow fasciae close together, if apparent (a). Lateral portion of mesosternum without bold white to yellow pubescence.....
.....*Xylotrechus quadrimaculatus* (Haldeman)

- 168'**. Pronotum with white or yellow anterior and posterior spots, usually diffuse (b); anterior spots extending down sides of pronotum. Elytron with anterior and antemedial white to yellow narrow fasciae widely separated, if apparent (b). Lateral portion of mesosternum with bold white to yellow pubescence*Xylotrechus aceris* Fisher



- 169(167')**. Anterolateral margin of pronotum with distinct, isolated fasciae of yellow or white pubescence (a). Frontal carinae borders and elytra with distinct, narrow fasciae of yellow or white pubescence**170**

- 169'**. Pronotum with diffuse or large patches of pubescence, not isolated in anterolateral region (b). Elytra and frontal carinae margin with fasciae of pubescence more diffuse or in broader bands**172**

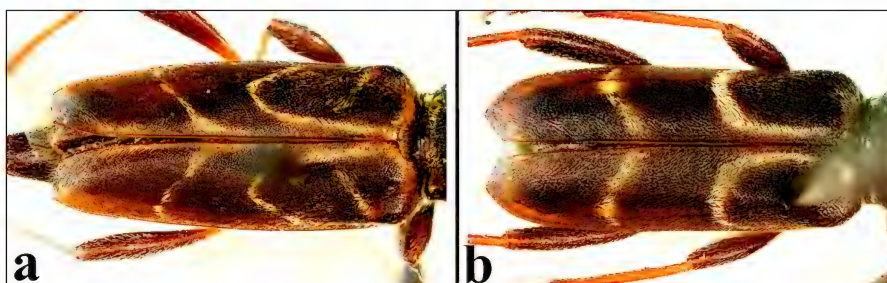


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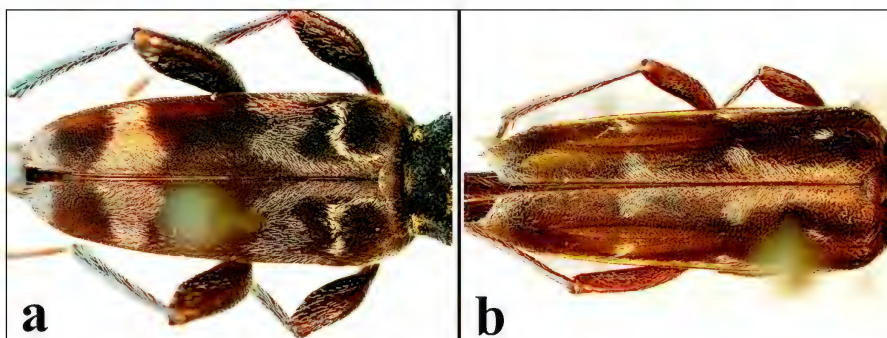
- 170(169).** Elytron with anterior fascia extending posteriorly from near scutellum to lateral edge of elytron at basal one-third (a). Antennae black *Xylotrechus nitidus* (Horn)
- 170'.** Elytron with anterior fascia in different configuration. Antennae light to dark reddish brown **171**



- 171(170').** Antennae light reddish brown. Anterior fasciae extending from outside of humerus, posteriorly toward suture to basal one-fourth (a). Outer apical portion of elytra with small spine *Xylotrechus convergens* LeConte
- 171'.** Antennae dark reddish brown. Anterior fascia (if present) transverse (b). Outer apical portion of elytron at most dentate *Xylotrechus schaefferi* Schott

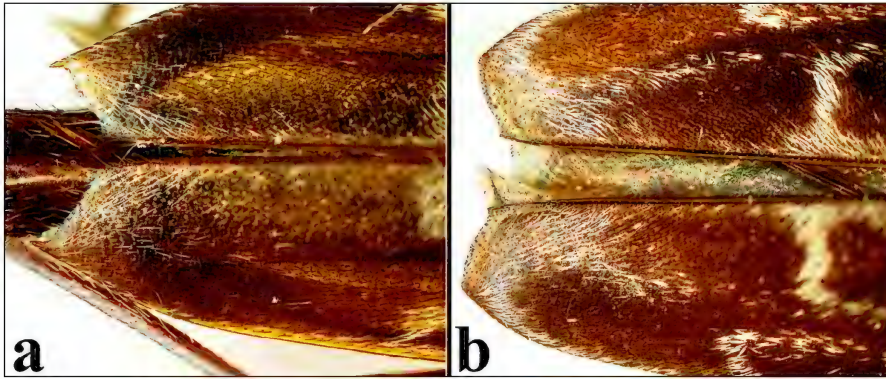


- 172(169').** Elytron with subapical and antemedial transverse fasciae as broad or broader than femur. Subapical fasciae continuous from suture to outer edge of elytron (a)..... *Xylotrechus colonus* (Fabricius)
- 172'.** Elytron with fasciae narrower. Subapical fascia broken (b) **173**



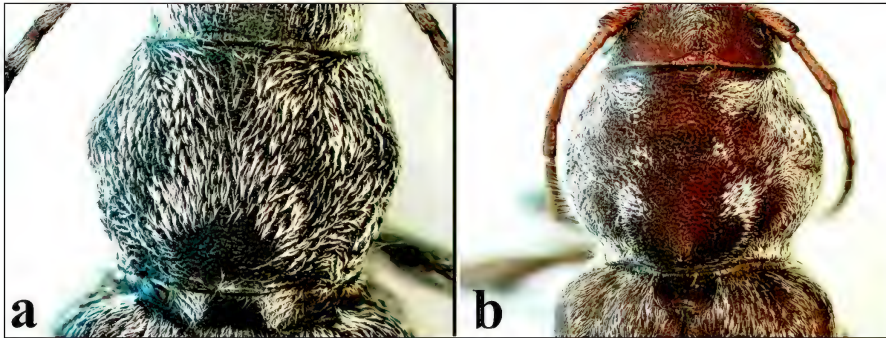
173(172'). Outer elytral apex with spine (a). Fasciae of elytra concentrated along suture.....
*Xylotrechus sagittatus* (Germar)

173'. Outer elytral apex at most dentiform (b). Fasciae of elytra not concentrated along suture....**174**



174(173'). Pronotal disk center and sides with diffuse, white or tawny pubescence, mostly obscuring granulae (a) *Xylotrechus annosus annosus* (Say)

174'. Pronotal disk center mostly without white or tawny pubescence, exposing granulae (b).....
*Xylotrechus integer* (Haldeman)



175(166'). Anterior margin of pronotum (and sometimes elsewhere) with an isolated, divided band of yellow or white pubescence (a). Antennae short, not surpassing apical third of elytra**176**

175'. Anterior margin of pronotum without isolated band of pubescence. Antennal length variable**178**

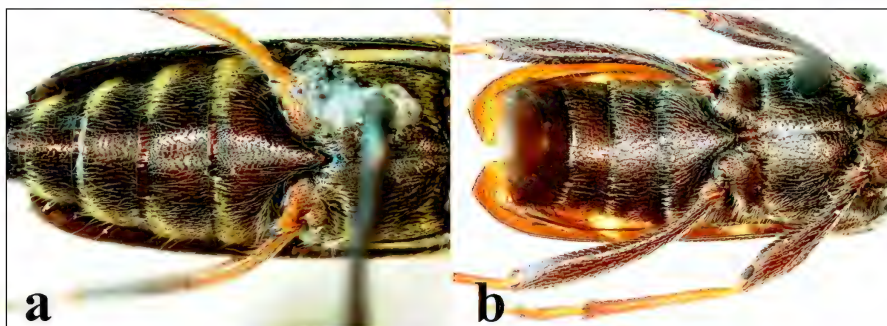


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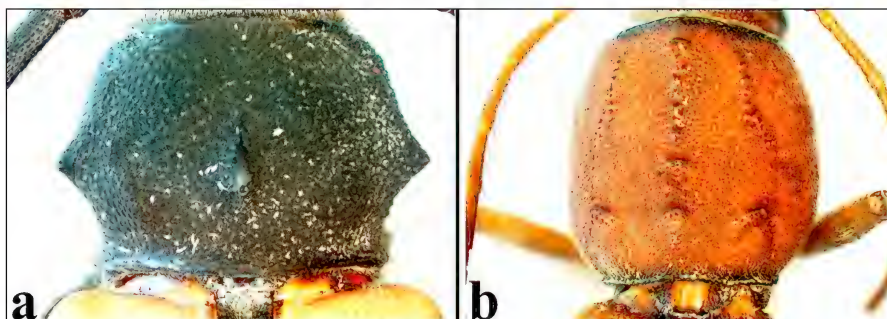
- 176(175).** Legs clothed in dense, yellow pubescence. Pronotum smooth, with very fine punctures.
 Large species over 2 cm (a)*Glycobius speciosus* (Say)
- 176'.** Legs mostly glabrous. Pronotum densely granulate. Small species, less than 1.5 cm**177**



- 177(176').** Margin of metasternum and abdominal sternites margined with dense yellowish or white pubescence (a).....*Xylotrechus nitidus* (Horn)
- 177'.** Margin of metasternum and abdominal sternites without conspicuous, dense yellowish or white pubescence (b) *Xylotrechus schaefferi* Schott



- 178(175').** Pronotum with single (or occasionally double), distinct, pointed lateral projection(s) at about middle of sides (a).....**179**
- 178'.** Pronotum without lateral pointed projections at middle of sides (b) although some species have rounded projections (as in 209a-b, for example)**197**



179(178). Elytra bright metallic green or blue (rarely reddish) (a). Femora, except for apex, pale red; remainder of legs black*Plinthocoelium suaveolens suaveolens* (Linnaeus)

179'. Elytra without metallic coloration. Legs differently colored (uniform in most species).....**180**



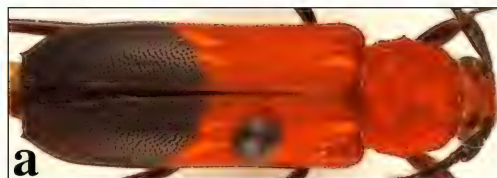
180(179'). Most antennomeres distinctly and boldly bicolored, yellow at base and black at apex (a) (known only from Florida in the US) *Trachyderes mandibularis* Dupont

180'. Antennae uniformly colored**181**



181(180'). Posterior half, approximately, of elytron black, remainder red, yellow, or orange. Black portion of elytra does not extend anteriorly to scutellum (a).....**182**

181'. Elytron differently colored**184**

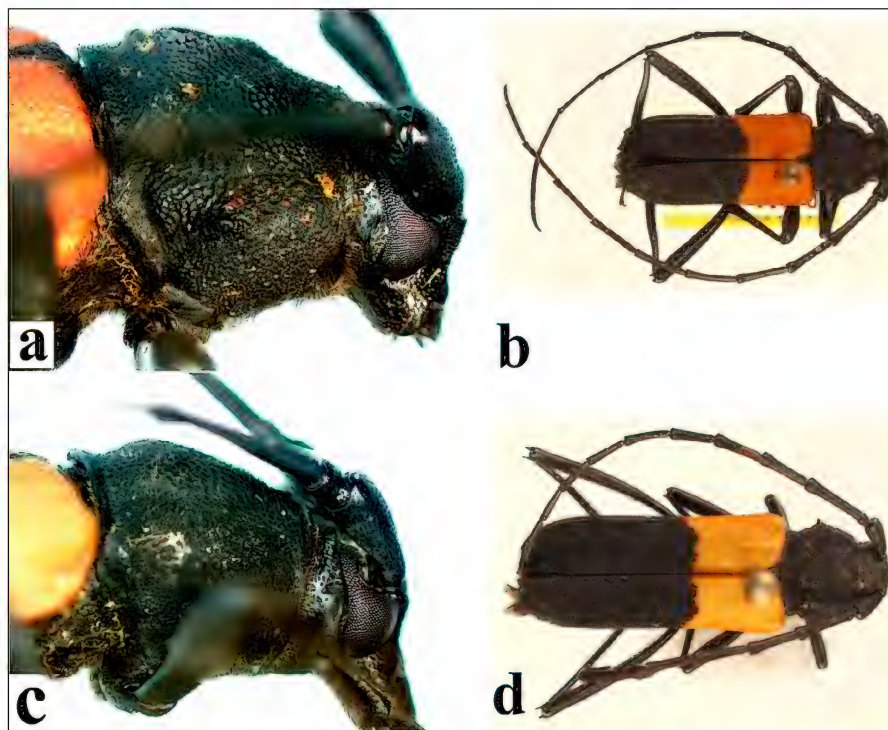


182(181). Scutellum the same color as elytral base, either yellow, orange, or red (see 181a above) (known only from Florida in the US)*Heterops dimidiatus* (Chevrolat)

182'. Scutellum black, contrasting sharply from color of basal region of elytron**183**

Key

- 183(182'). Pronotum with strong, multiple dorsal tubercles throughout disk (a, b)..... *Purpuricenus paraxillaris* MacRae
- 183'. Pronotum weakly, dorsally tuberculate, only at center of disk (c, d)..... *Purpuricenus axillaris* Haldeman



- 184(181'). Basal third of elytra reddish or orange, remainder black. Black portion of elytron angling up to connect with black scutellum (a)..... *Purpuricenus humeralis* (Fabricius)
- 184'. Elytron differently colored185

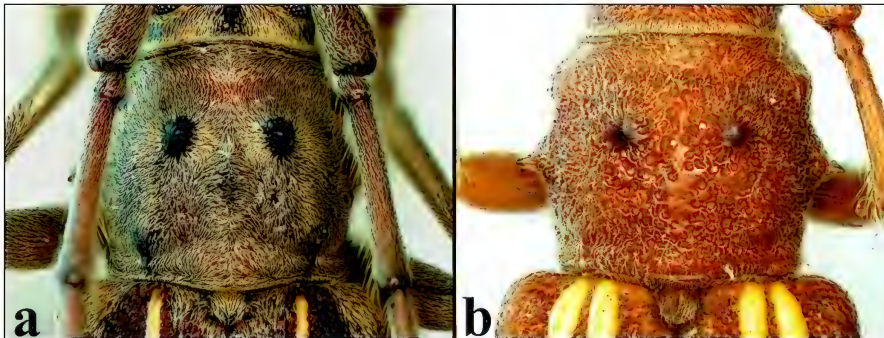


- 185(184'). Elytron with 3-4 short, straight, raised ivory colored calli. Remainder of elytron brown or gray (a). Meso and metafemoral apices strongly spined (*Eburia*)186
- 185'. Elytra without raised ivory calli. Elytral coloration variable. Femoral apices of most species without spines.....191



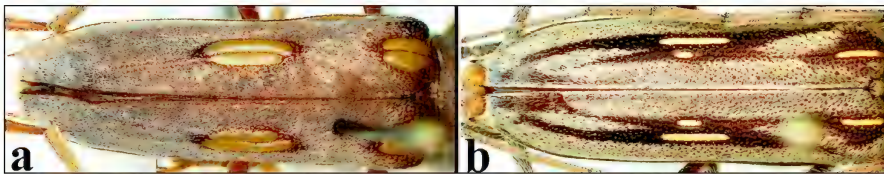
186(185). Elytra and pronotum covered in dense pubescence. Surface appearing gray (a).....187

186'. Elytra and pronotum with sparse pubescence. Surface appearing brown (b).....188



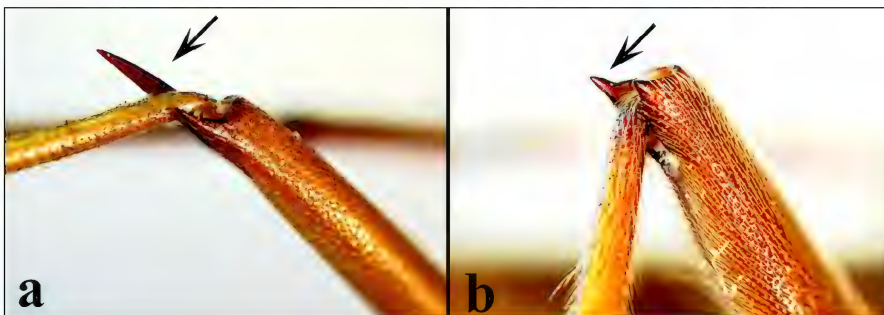
187(186). Each elytron with four pronounced ivory calli in two pairs. Calli units within a pair of similar size to each other (a). Calli oval in shape (known only from Florida).....
.....*Eburia cinereopilosa* Fisher

187'. Each elytron with two ivory calli medially; each callus of this pair of differing size. Basal calli variable, either absent, present singly (b), or paired. Calli rectilinear in shape (known only from Florida).....*Eburia stigma* (Olivier)



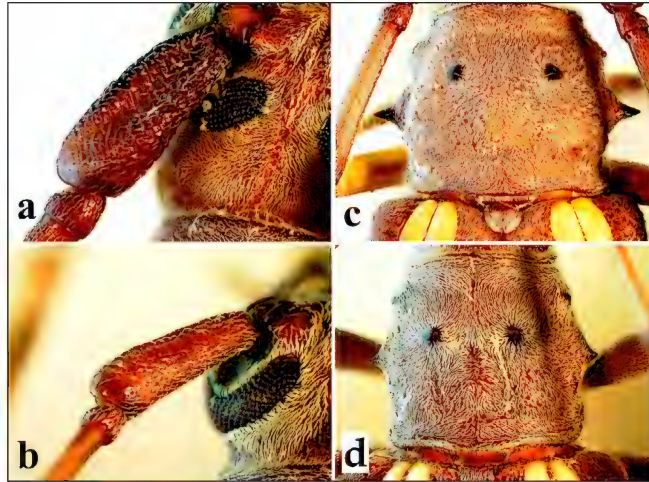
188(186'). Mesal mesofemoral spine very long, over twice as long as outer spine (a).....189

188'. Mesal mesofemoral spine moderately long, little longer than outer spine (b)190

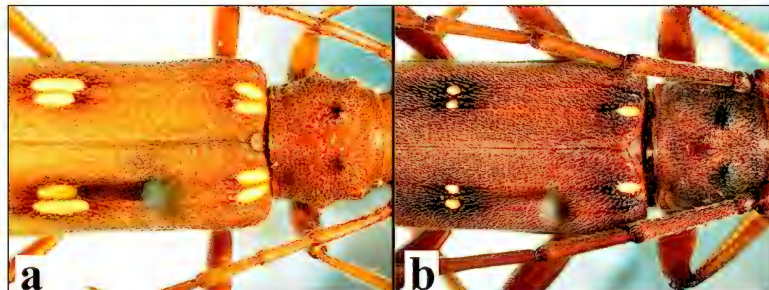


Key

- 189(188).** Scape rugose and asperate (a). Prothoracic spines long, extending to maximum width of elytra (c) (known only from Florida)*Eburia stroheckeri* Knull
- 189'.** Scape mostly smooth (b). Prothoracic spines short, not extending as wide as plane of elytral width (d)..... *Eburia distincta* Haldeman



- 190(188').** Elytra and pronotum light brown. Eburneous ridges of elytra bold, with very little darkening of peripheral region (a)*Eburia quadrigeminata* (Say)
- 190'.** Elytra and pronotum dark brown. Eburneous ridges small and less bold as in former, with distinctly darker peripheral (and sometimes costal) regions (b) (note: these are highly variable and anomalous forms do occur. *E. haldemani* could be a synonym of *E. quadrigeminata*).....
.....*Eburia haldemani* LeConte



- 191(185').** Head and pronotum totally covered in large, confluent punctures (a). Femora strongly clavate *Michthisoma heterodoxum* LeConte
- 191'.** Head and pronotum differently punctured. Femora linear to very slightly enlarged**192**



192(191'). Elytra mostly pale green (a) (possible in Florida, not known elsewhere in the U. S.)...
*Chlorida festiva* (Linnaeus)

192'. Elytra of differing color**193**



193(192'). Pronotum black, densely clothed in erect hairs. Elytra appearing corrugated longitudinally (a, b)*Tragidion coquus* (Linnaeus)

193'. Pronotum brown or reddish, moderately to sparsely pubescent with few erect hairs. Elytra smooth, not appearing corrugated.....**194**



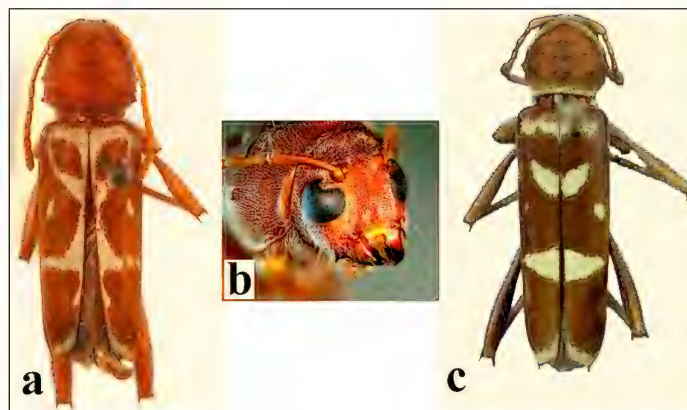
194(193). Pronotum with scattered short, transverse crests, especially in row at middle of disk (a)
**195**

194'. Pronotum without crests**196**



Key

- 195(194).** Elytral pubescent fasciae connected or narrowly separated along suture (a). Occiput and eye region of head without dense pubescence (b) *Neoclytus cordifer* (Klug)
- 195'.** Elytral pubescent fasciae broadly interrupted along suture (c). Occiput and eye region of head with dense pubescence *Neoclytus longipes* (Drury)



- 196(194').** Elytra uniformly colored, without pale antemedial macula (a).....
..... *Knolliana cincta spinifera* (Fabricius)
- 196'.** Elytra with pale, antemedial macula (b) *Knolliana cincta cincta* (Drury)



- 197(178').** Pronotum, at least at middle of disk, with series of short, transverse crests (not wrinkles) (see 157a). Antennae short, usually attaining middle of elytra at most (*Neoclytus* [in part], *Euryscelis*) **198**
- 197'.** Pronotum without series of short, transverse crests (see 157b). Antennae variable in length, attaining elytral apex in most species **204**

- 198(197).** Extreme anterior margin of pronotum at middle produced into elevated crest, higher than other ridges (a). Sides of prothorax with numerous erect, white hairs. Metatibia of males about as long as body *Euryscelis suturalis* (Olivier)
- 198'.** Anterior-most ridge behind anterior margin of pronotum. Sides of prothorax with very sparse erect, white hairs. Metatibia of males shorter than body **199**



- 199(198').** Each elytron with a series of four (rarely three) evenly spaced, narrow, transverse pale yellow fasciae (a) *Neoclytus acuminatus* (Fabricius)
- 199'.** Elytra with different pattern of fasciae **200**



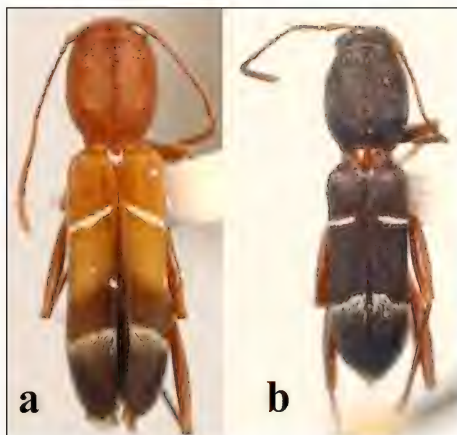
- 200(199').** Each elytron with two slightly obliquely transverse, narrow, white to pale yellow fasciae (one at apical third, one at basal third) (a) **201**
- 200'.** Elytra with different pattern of fasciae **202**



Key

201(200). Integument mostly pale reddish brown (a)..... *Neoclytus jouteli simplarius* Blatchley

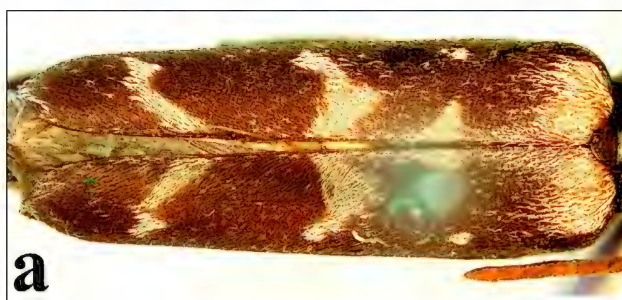
201'. Integument mostly black (b).....*Neoclytus jouteli jouteli* Davis



202(200'). Integument dark brown. Outer apex of elytron at most dentiform (a) (note: the uncommon *Neoclytus approximatus* would also key here but is not included due to its rarity).....

.....*Neoclytus horridus* (LeConte)

202'. Integument reddish. Outer apex of elytron produced into spine203



203(202'). Elytral pubescent fasciae broadly interrupted along suture. Occiput and eye region of head without dense pubescence (see 195a, b)*Neoclytus cordifer* (Klug)

203'. Elytral pubescent fasciae connected or narrowly separated along suture. Occiput and eye region of head with dense pubescence (see 195c)*Neoclytus longipes* (Drury)

204(197'). Each femur with a large tooth ventrally (a) (Curiini)205

204'. Each femur without a large tooth ventrally206



- 205(204).** Fourth antennomere about half as long as scape (a). Pronotum nearly parallel-sided in posterior third (a, photo courtesy Gino Nearn). Integument glossy.....*Plectromerus dentipes* (Olivier)
- 205'.** Fourth antennomere about as long as scape or longer (b). Pronotum evenly rounded at sides, without constriction (b, photo courtesy Gino Nearn). Integument not shiny.....*Curius dentatus* Newman



- 206(204').** Pronotum with distinct, but rounded lateral tubercles. Base of pronotum constricted and much narrower than elytral base, reaching only slightly wider than halfway point of each elytron (a) (*Obrium*).....**207**
- 206'.** Pronotum without distinct lateral tubercles, usually evenly, broadly rounded laterally or sub-cylindrical. Base of pronotum not strongly constricted and usually wider than halfway point of each elytron at base.....**209**



Key

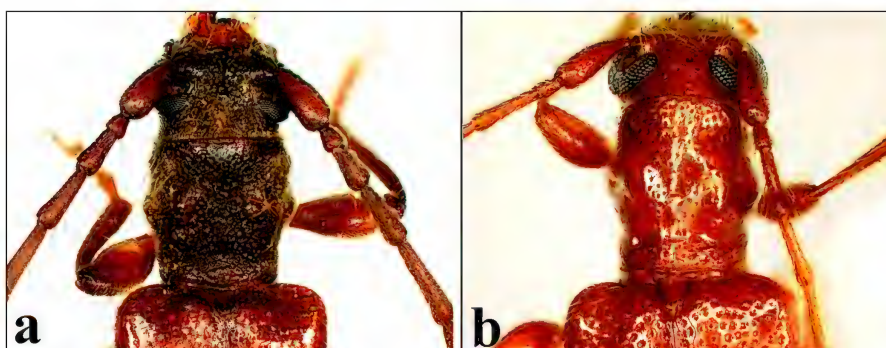
207(206). Elytra maculate (a) *Obrium maculatum* (Olivier)

207'. Elytra unicolorous, without maculae208



208(207'). Integument dark red to piceous on head and pronotum. Pronotum not shiny, with dense, confluent, large punctures (a) *Obrium rubidum* LeConte

208'. Integument pale testaceous throughout. Pronotum shiny with sparse, small punctures (b) *Obrium rufulum* Gahan



209(206'). Metafemoral apex with distinct spine mesally. Elytra entirely bright red or with partial red or yellow bold markings210

209'. Femoral apices without spines. Elytra coloration variable, most species without red markings212

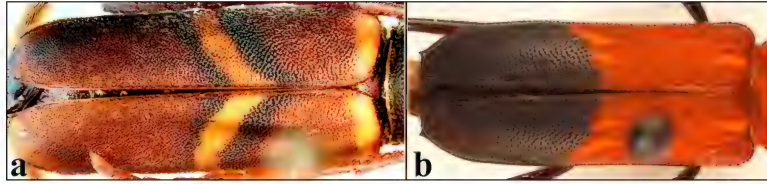
210(209). Elytra entirely red. Pronotum long, cylindrical, and entirely black (a) *Ancylocera bicolor* (Olivier)

210'. Elytra partially red or reddish brown. Pronotum short, broadly rounded at sides, yellow to reddish brown211



211(210'). Elytron reddish brown except for oblique, narrow yellow fascia at middle that is demarcated by black border (a) (known only from Florida)*Aethecerinus hornii* (Lacordaire)

211'. Elytron with approximate posterior half black and anterior half red or yellow (b).....*Heterops dimidiatus* (Chevrolat)



212(209'). Basal epipleural region of elytron with abrupt, upward constriction over metepisternum (a) (Agallissini)213

212'. Epipleural region of elytron without constriction.....215



213(212). Pronotum with four partial to complete, narrow, longitudinal white fasciae (a) (known only from Florida and Georgia)*Osmopleura chamaeropsis* (Horn)

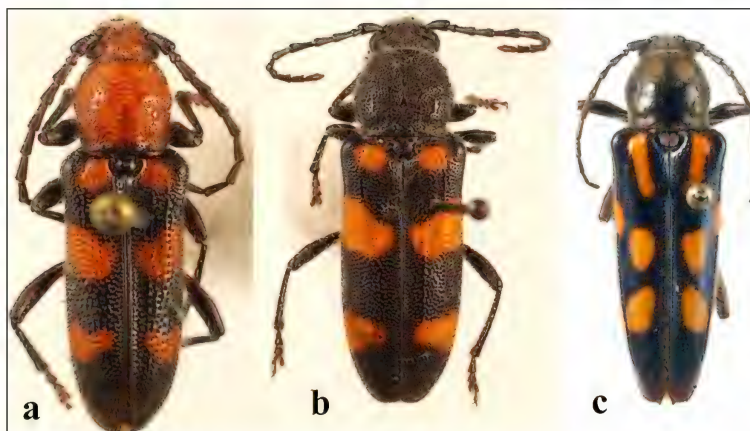
213'. Pronotum without white fasciae214



Key

214(213'). Pronotum dull, with dense, coarse, deep punctures (a, b) (known only from Florida and Georgia)*Zagymnus clerinus* (LeConte)

214'. Pronotum shiny with very few, sparse, shallow punctures (c).....*Agallissus lepturoides* (Chevrolat)



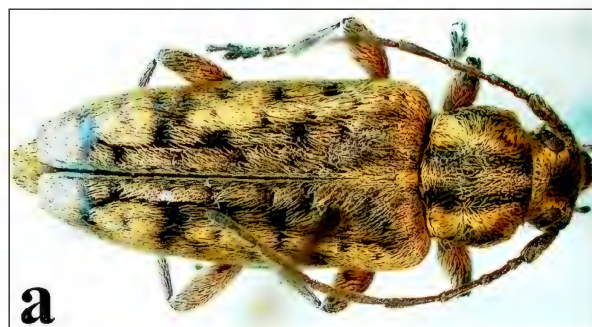
215(212'). Femora very long and strongly pedunculate-clavate. Non-clavate portion of metafemur over three times as long as clavate portion (a)*Rhopalophora longipes* (Say)

215'. Femora linear, gradually enlarged apically, or clavate, with, at most, a small peduncle**216**



216(215'). Entire body densely clothed in yellowish pubescence that is much lighter than integument (broken somewhat by pattern of small glabrous maculae on elytra.) Vague broad, longitudinal vittae formed on pronotum. Pronotum widest anteriorly, gradually tapering posteriorly (a).....*Atimia confusa* (Say)

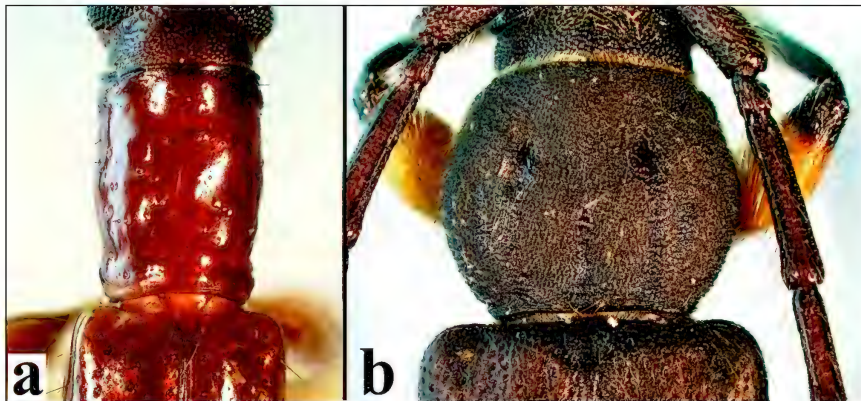
216'. Body mostly glabrous or with diffuse pubescence not obscuring most of surface. Most species without pubescent vittae on pronotum. Pronotum widest at about middle or sub-cylindrical**217**



- 217(216')**. Pronotum black except for two orange longitudinal vittae around broad disk region. Vittae connect with orange-yellow base of elytra that tapers along epipleural edge. Remainder of elytra black, usually extending up along suture to near scutellum (a).....*Elytroleptus floridanus* (LeConte)
- 217'**. Pronotum and elytral coloration different218



- 218(217')**. Pronotum long and cylindrical to subcylindrical; much longer than wide (a) (*Heterachthes*).....219
- 218'**. Pronotum short, broadly rounded at sides, little longer than wide or wider than long (b).....221

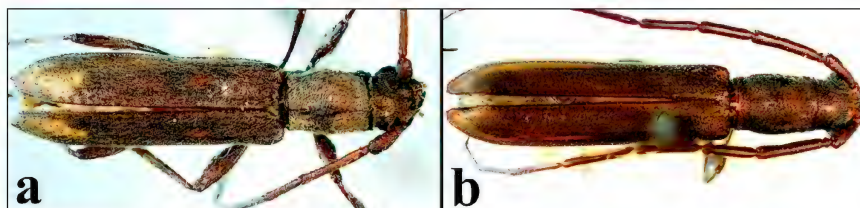


- 219**. Integument very shiny. Elytra with at least one sub-basal pale macula (and usually a subapical pale macula) on a testaceous to dark reddish-brown integument (a).....*Heterachthes quadrimaculatus* Haldeman
- 219'**. Integument rather dull. Elytra without maculae or, at most, with only a vague, subapical macula.....220

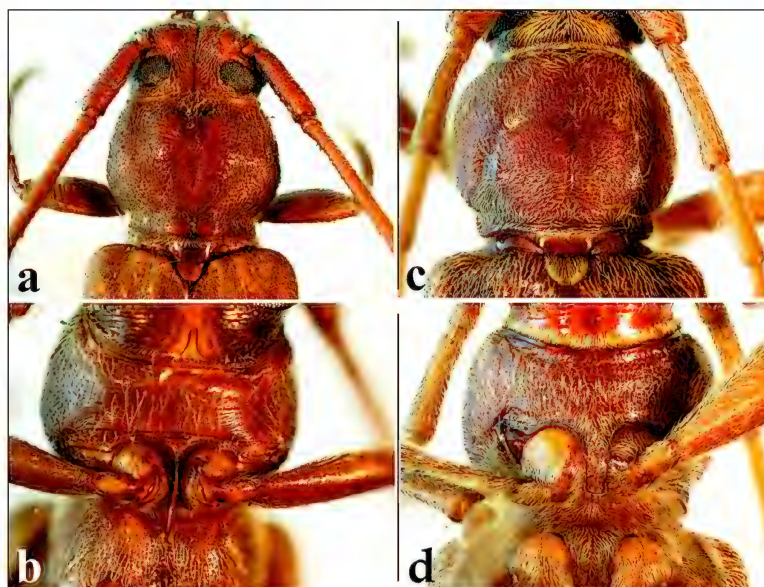


Key

- 220(219')**. Pronotum and elytra with moderately dense pubescence. Elytra reddish-brown, sometimes with vague posterior pale macula (a) (known only from Florida).....*Heterachthes sablensis* Blatchley
- 220'**. Pronotum and elytra with sparse pubescence. Elytra dark reddish brown to black, without maculae (b)*Heterachthes ebenus* Newman



- 221(218')**. Entire integument and appendages all uniformly testaceous to light reddish brown. No other colors, pubescent fasciae, vittae, or maculae present**222**
- 221'**. At least two colors present on appendages, pronotum, and/or elytra, or integument uniformly dark. Fasciae, vittae, or maculae may or may not be present**231**
- 222 (221)**. Pronotum with strong and abrupt basal constriction (a). Prosternal process as a thin, vertical sheet between procoxae (b) *Oeme rigida* (Say)
- 222'**. Pronotum without strong, abrupt basal constriction (c). Prosternal process either expanded at apex or tapering to point, not as a vertical sheet between procoxae (d)**223**

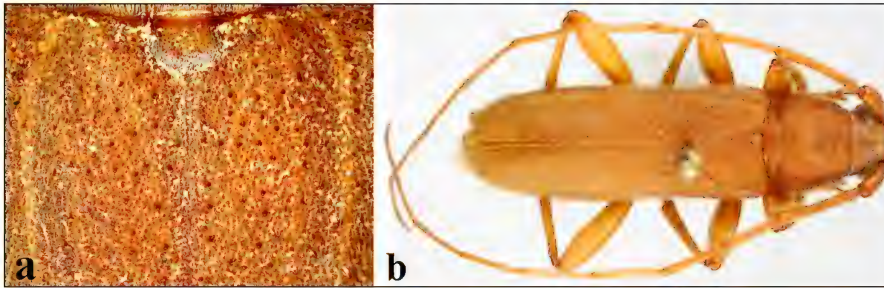


- 223(222')**. Body very dorso-ventrally flattened (a). Tibiae shorter than clavate portion of femora. Femora strongly clavate nearly to base. Pronotum semiquadrate, not evenly rounded at sides....*Smodicum cucujiforme* (Say)
- 223'**. Body not strongly flattened. Tibiae longer than clavate portion of femora, or, if not clavate, about as long as femora or longer. Pronotum approximately, evenly rounded at sides.....**224**



224(223'). Elytra with scattered small dark granules/asperites around basal one-third (a, b)
(introduced from Europe into North America) *Stromatium fulvum* (Villers)

224'. Elytra without granules.....**225**



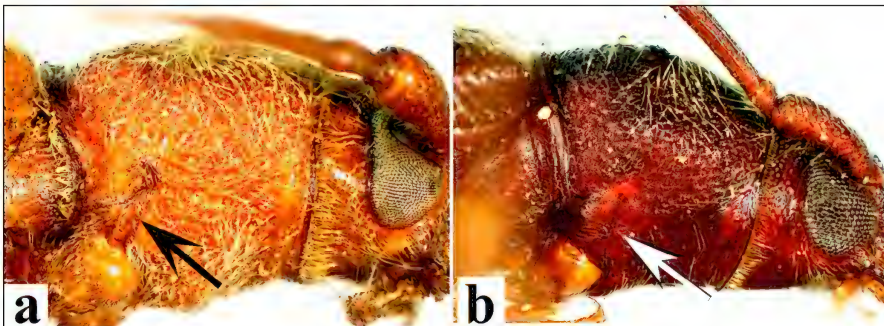
225(224'). Elytra weakly attenuate, exposing hind wing along suture. Antennae 12-segmented (twelfth segment reduced and inserted in cup opening of eleventh) (a, b) (known only from Florida)
..... *Plesioclytus relictus* Giesbert

225'. Elytra not antennate, not exposing hind wing along suture. Antennae 11-segmented**226**



226(225'). Procoxae widely open laterally, exposing trochantin (a)**227**

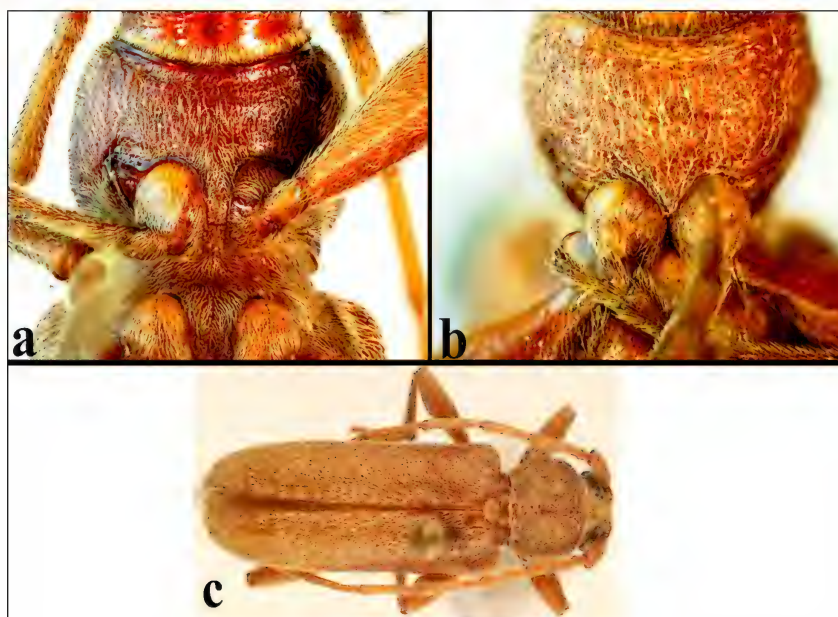
226'. Procoxae closed or narrowly open laterally (b).....**229**



Key

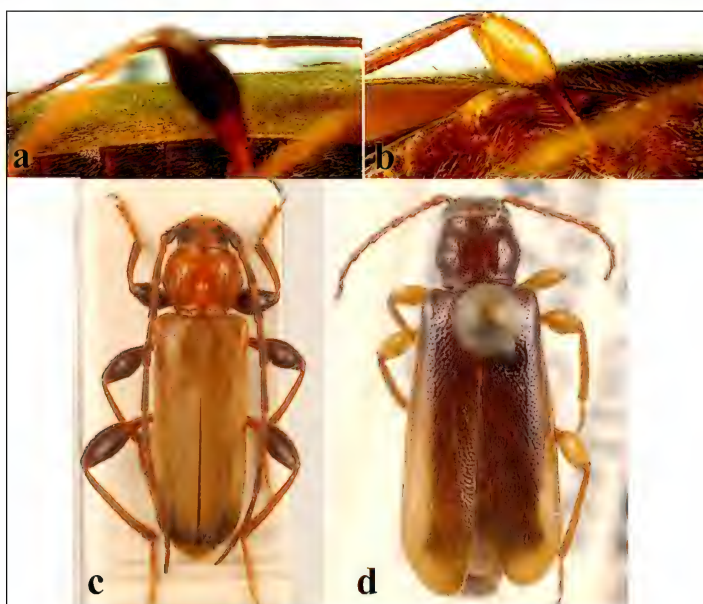
227(226). Procoxal process wide between procoxae, not tapering to a point between them (a);
habitus as in figure (c).....*Hesperophanes pubescens* (Haldeman)

227'. Procoxal process tapering to a point and terminating between procoxae (b).....228



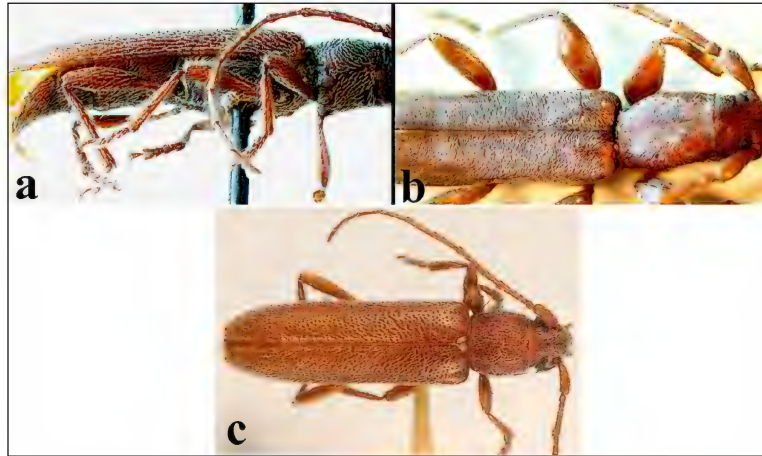
228(227'). Elytra covered in short, mostly depressed pubescence (a, c).....
.....*Phymatodes testaceus* (Linnaeus)

228'. Elytra covered in longer, mostly erect pubescence (b, d).....*Phymatodes aereus* (Newman)



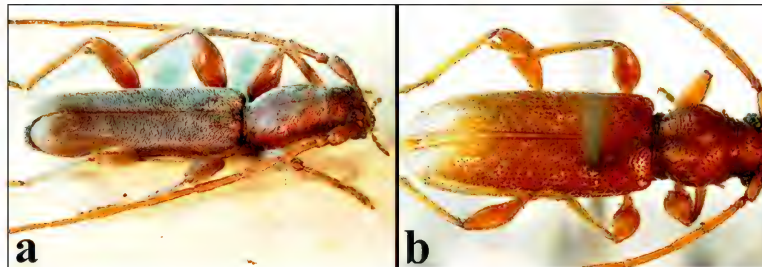
229(226'). Femora gradually enlarged apically (a); habitus as in figure (c).....
.....*Micranoplium unicolor* (Haldeman)

229'. Femora strongly clavate (b).....230



230(229'). Pubescence translucent, dense. Femora and tibiae without long hairs. Elytra with small, shallow punctures (a) (introduced from Europe into U. S.) *Gracilia minuta* (Fabricius)

230'. Pubescence sparse. Femora and tibiae with numerous long hairs. Elytra with large, deep punctures (b) (known only from Florida in the U. S.) *Curtomerus flavus* (Fabricius)



231(221'). Entire body and appendages uniformly reddish-brown to dark brown, without distinct maculae or pubescent fascia **232**

231'. Integument either bicolored, some species with elytral maculae or pubescent vittae, or unicolorous dark blue or purple. Never completely unicolorous reddish brown to dark brown **233**

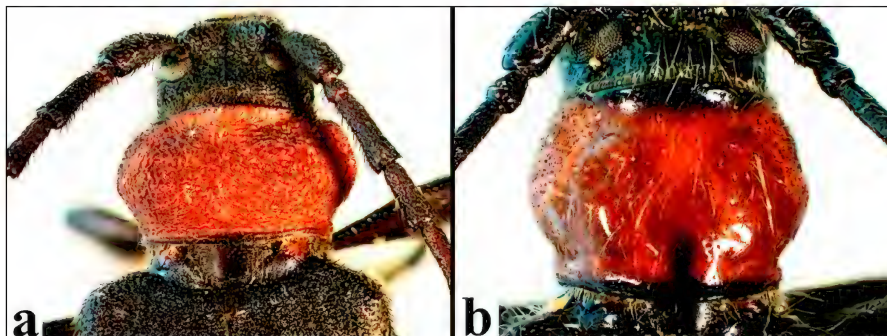
232(231). Antennae 12-segmented, without carinae; elytra attenuate, exposing hind wing along most of suture (see 225a-b) (known only from Florida) *Plesioclytus relictus* Giesbert

232'. Antennae 11-segmented, bicarinate; elytra not attenuate (a, b) *Tylonotus masoni* (Knull)



Key

- 233(231').** Pronotum unicolorous red, orange, or reddish brown, elytra unicolorous dark blue or black (pronotal margins rarely partially black).....**234**
- 233'.** Coloration of pronotum and/or elytra different**240**
- 234(233).** Pronotum angulate at middle of sides, much wider than long; densely punctate, semirugose, dull (a) *Ropalopus sanguinicollis* (Horn)
- 234'.** Pronotum rounded at sides; sparsely punctate, shiny, smooth (b).....**235**



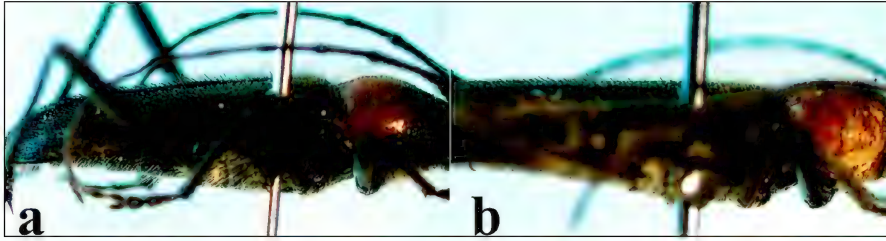
- 235(234').** Legs uniformly dark blue or black.....**236**
- 235'.** Legs uniformly or partially pale testaceous.....**238**

- 236(235).** Prosternal process short and narrowed to a point between procoxae (a). Last maxillary palpomere greatly expanded (b); habitus as in figure (c) *Pronocera collaris* (Kirby)
- 236'.** Prosternal process extending fully between procoxae and not narrowing between them. Last maxillary palpomere not greatly expanded (d).....**237**



- 237(236').** Most elytral pubescence shorter than that of pronotum, suberect at base and semi-appressed apically (a).....*Batyle ignicollis ignicollis* (Say)

- 237'**. Most elytral pubescence about as long as that of pronotum, erect or suberect throughout (b)
 (note: probably, this should *not* be recognized as a separate taxon from the nominate form)
 *Batyle ignicollis australis* Linsley



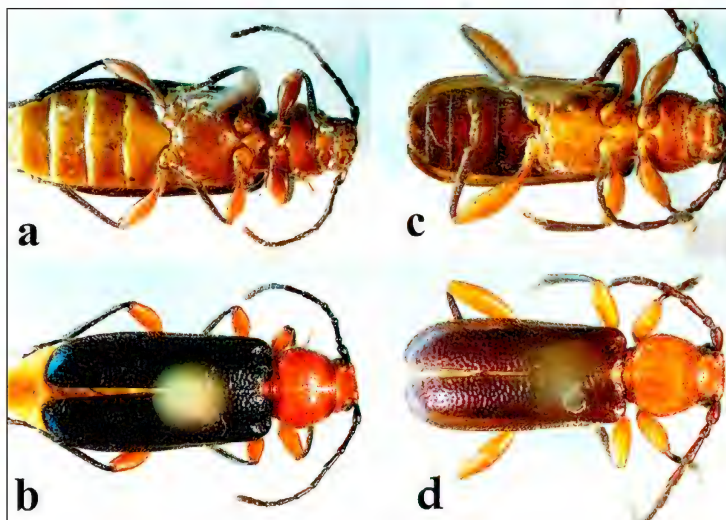
- 238(235')**. Scutellum light testaceous or yellow, contrasting from elytral coloration. Species less
 than 1 cm long **239**

- 238'**. Scutellum dark bluish, the same color as elytra (a). Species over 1 cm long (this is a probable
 introduction long ago from Europe) *Phymatodes testaceus* (Linnaeus)



- 239(238)**. Venter coloration uniformly pale reddish or testaceous (a). Pronotum more evenly rounded
 at sides (b) *Phymatodes amoenus* (Say)

- 239'**. Abdominal venter slightly darker, in part at least, than remaining venter which is pale reddish
 or testaceous (c). Pronotum with weakly perceptible angle at middle of sides (d)
 *Phymatodes lengi* Joutel



Key

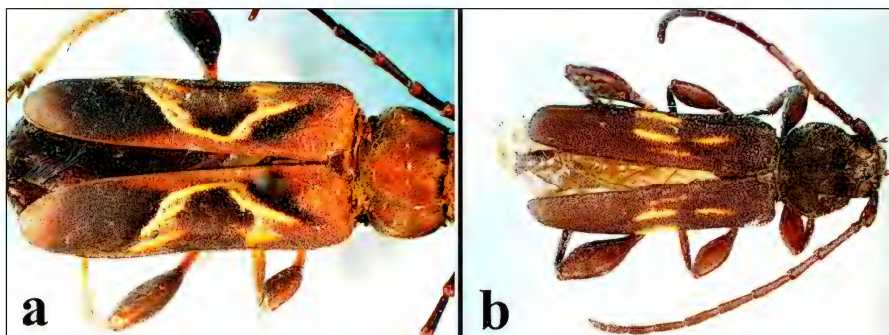
240(233'). Elytra with series of long, curved, raised ivory calli (a) (*Physocnemum*)241

240'. Elytra without ivory calli242



241(240). Pronotum, head, tibiae, and basal one-third to two-thirds of elytra reddish brown (a)*Physocnemum andreae* (Haldeman)

241'. Pronotum, head, most of legs and elytra very dark brown to black (b).....*Physocnemum brevilineum* (Say)

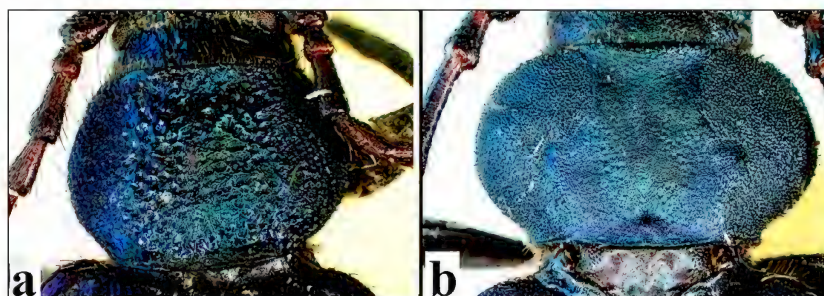


242(240'). Integument dark metallic blue, green, or purple, without pubescent fasciae or maculae (*Callidium*).....243

242'. Integument of different color, fasciae or maculae present in most species247

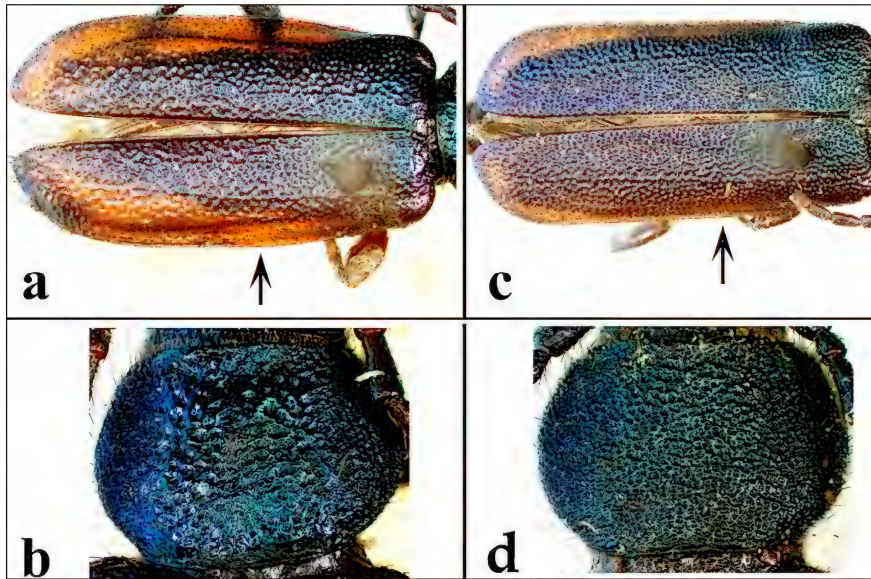
243(242). Pronotum coarsely punctate throughout, shiny (a). Elytra similarly shiny244

243'. Pronotum with fine micropunctures throughout, dull or not very shiny (b). Elytra dull (like pronotum) or distinctly more shiny than pronotum246



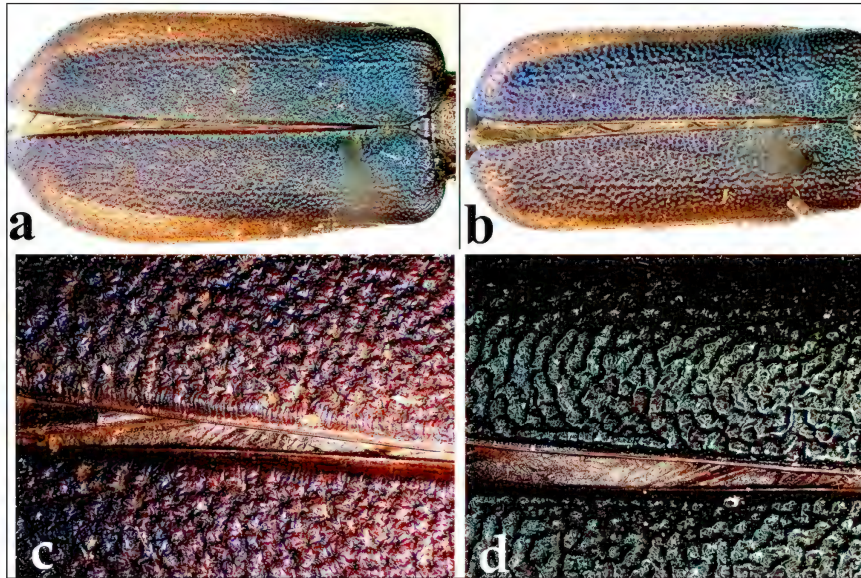
244(243). Lateral margins of elytra moderately to strongly expanded at middle (a). Middle of pronotal disk with distinctly sparser punctation than sides (b)..... *Callidium frigidum* Casey

244'. Lateral margins of elytra weakly or not expanded at middle (c). Disk of pronotum with approximately even punctation as sides (d).....**245**



245(244'). Elytra with fine micropunctures around coarse punctures throughout (a, c).....
..... *Callidium schotti* Schaeffer

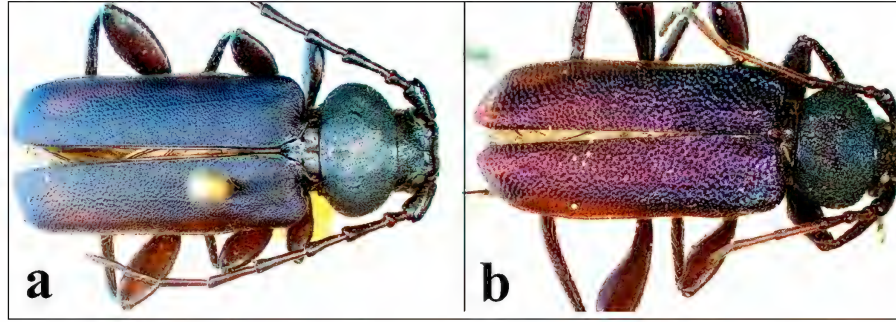
245'. Elytra with coarse punctures, lacking fine micropunctures throughout (b, d).....
..... *Callidium texanum* Schaeffer



246(243'). Elytra and pronotum semi-dull, with fine micropunctures throughout (a). Disk of pronotum sometimes with partially defined amphora pattern. Epipleuron weakly expanded antero-medially
..... *Callidium antennatum* Newman

Key

- 246'**. Elytra distinctly more shiny than pronotum; micropunctures more prevalent on pronotum than elytra (b). Disk of pronotum usually with three small, poorly defined calli at middle. Epipleuron not expanded.....*Callidium violaceum* (Linnaeus)



- 247(242')**. Elytra with distinct pale orange, yellow, or white maculae (formed by integument color, not pubescence) on a darker background. These maculae form transverse bands or spots that span (or nearly span) width of elytra.....**248**

- 247'**. Elytra differently colored or patterned, often with white or yellow fasciae of pubescence on a darker background.....**253**

- 248(247)**. Each elytron with a narrow antemedial and postmedial transverse white band on a mostly black background (anterior one-third of elytron sometimes red or reddish-brown) (a)...
.....*Phymatodes varius* (Fabricius)

- 248'**. Pale elytral maculae in different arrangement.....**249**



- 249(248')**. Each elytron with a basal transverse yellow band and an oblique antemedial band bordered by a narrow black margin (see 211a).....
.....*Aethecerinus hornii* (Lacordaire)

- 249'**. Pale elytral maculae in different arrangement.....**250**

- 250(249')**. Anterior two thirds of elytra yellow, interrupted by a single black macula at middle, and apical one-third entirely black (a).....
.....*Semanotus ligneus* (Fabricius)

- 250'**. Pale elytral maculae in different arrangement.....**251**



251(250'). Each elytron with an antemedial and subapical oval, yellow macula on a reddish brown background (a) *Tylonotus bimaculatus* **Haldeman**

251'. Pale elytral maculae in different arrangement **252**



252(251'). Pronotum mostly shiny, without asperites. Integument dark reddish brown with an undulating antemedial pale macula on elytra (a) (known only from Florida in the US) *Curtomerus fasciatus* **(Fisher)**

252'. Pronotum dull with numerous small asperites. Integument pale reddish brown with an antemedial and sometimes subapical pale macula on elytra (b) *Penichroa fasciata* **(Stephens)**



253(247'). Elytra with white or yellow fasciae of pubescence on a darker background **254**

253'. Elytra without white or yellow fasciae of pubescence on a darker background **261**

254(253). Integument uniformly brown with a not-too-distinct antemedial transverse white pubescent fascia. Pronotum densely pubescent but with three shiny, glabrous calli on disk (a) *Hylotrupes bajulus* **(Linnaeus)**

254'. Elytral pubescent fasciae in different color and/or arrangement **255**



Key

- 255(254')**. Elytra with a series of at least three evenly spaced, undulating, narrow, white pubescent fasciae**256**
- 255'**. Elytral pubescent fasciae in different color and/or arrangement.....**257**
- 256(255)**. Pronotum densely covered in pubescence (a). Pubescent fascia of elytra diffuse. Antennae not reaching to midpoint of elytra *Xylotrechus annosus annosus* (Say)
- 256'**. Pronotum without white pubescence on large, circular, black region at center of disk (b). Pubescent fasciae of elytra distinct. Antennae reaching beyond midpoint of elytra.....
..... *Sarosesthes fulminans* (Fabricius)



- 257(255')**. Pubescent fasciae of elytra in one to three very narrow white oblique or transverse bands. Small ant-like species**258**
- 257'**. Pubescent fasciae of elytra bold yellow, in different configuration**260**

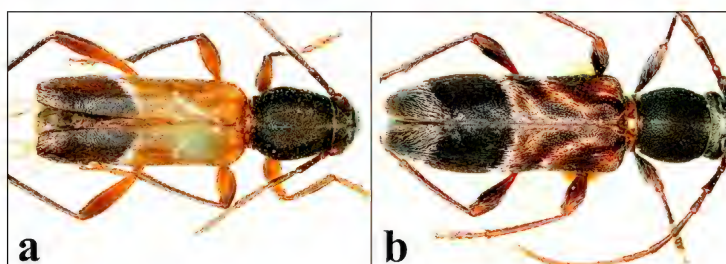
- 258(257)**. Elytron with a narrow, oblique, impunctate shiny band of integument at basal one third, bordered by very narrow white pubescent fasciae. Pronotum often with two arcuate, narrow longitudinal bands of white pubescence at base (a).....*Tilloclytus geminatus* (Haldeman)



- 258'**. Elytra without impunctate, shiny, oblique regions.....**259**

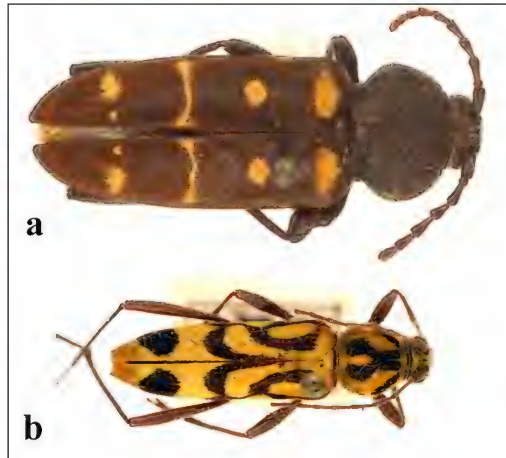
- 259(258')**. Elytra with one-two very narrow oblique bands of white pubescence (one postmedially and usually one antemedially). Apex of third antennomere unarmed (a).....
..... *Clytoleptus albofasciatus* (Castelnau & Gory)

- 259'**. Elytra with elytral apex broadly white fasciate, with one-two narrow transverse medial white fasciae, and with one narrow, oblique white fascia extending from near scutellum to outer transverse medial fascia. Apex of third antennomere usually dentiform mesally (b).....
.....*Microclytus gazellula* (Haldeman)



260(257'). Pronotum without conspicuous pubescence; elytron with four evenly spaced yellow pubescent patches or bands (a) *Calloides nobilis* (Harris)

260'. Pronotum with dense, yellow pubescence except for middle and anterolateral areas; elytron with dense yellow pubescent bands along suture, humerus, and most of apical one-third (b).....
..... *Chlorophorus annularis* (Fabricius)



261(253'). Head, pronotum, and elytra uniformly red or orange (elytral suture sometimes darker) (a)..... *Batyle suturalis* (Say)

261'. Integument of different color.....**262**



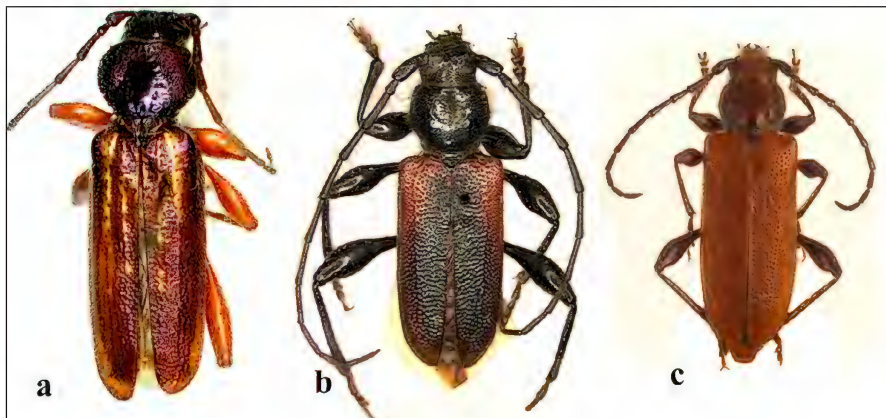
262(261'). Integument mostly orange with small black maculae on elytra. Elytral apex with moderate spine (a)..... *Achryson surinamum* (Linnaeus)

262'. Integument of different color. Elytral apices rounded.....**263**

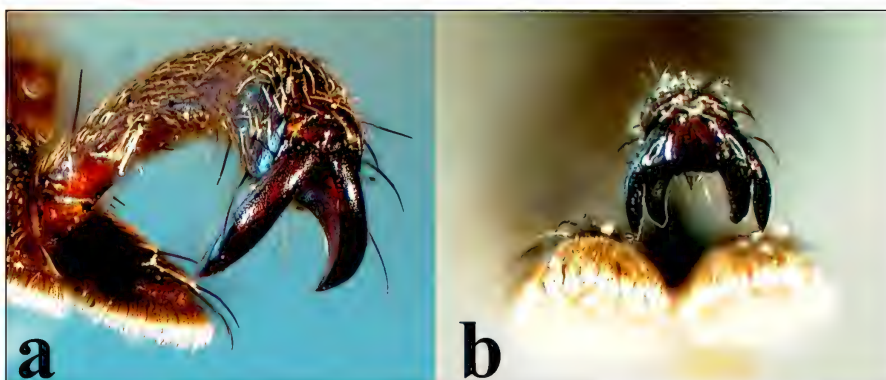


Key

- 263(262')**. Femora orange. Pronotum much wider anteriorly than posteriorly. Most specimens with subtle metallic blue, purple, or violet sheen on pronotum and sometimes elytra (a).....
.....*Meriellum proteus* (Kirby)
- 263'**. Femora dark reddish brown. Pronotum only slightly wider anteriorly than posteriorly. Specimens without metallic sheen (b, c) *Callidiellum rufipenne* (Motschulsky)



- 264(120')**. Tarsal claws simple (no visible lobes when viewed from front) (a)**295**
- 264'**. Tarsal claws appendiculate or bifid when viewed from front (b)**265**



- 265(264')**. Eyes divided into separate upper and lower lobes (a) (Tetraopini)**266**
- 265'**. Eyes not completely divided (b)**272**



266(265). Head and pronotum black. Very small, less than 0.5 cm long (a) (introduced from Europe) *Tetrops praeusta* Linnaeus

266'. Head and pronotum mostly orange to reddish. Larger than 0.5 cm long **267**



267(266'). Elytra completely black, without maculations. Narrow bodied, about 2 mm wide (a) *Phaea monostigma* (Haldeman)

267'. Elytra mostly reddish or orange with black spots or maculae. Larger and broader, most at least 5 mm wide (*Tetraopes*)..... **268**



268(267'). Head, pronotum, and elytra covered in dense, white pubescence covering most of surface (a) *Tetraopes pilosus* Chemsak

268'. Integument with only sparse pubescence not obscuring surface **269**



269(268'). Elytra with apical third and usually antemedial third with large angled black or dark gray macula (a) *Tetraopes melanurus* Schoenherr

269'. Elytra with only small spots **270**

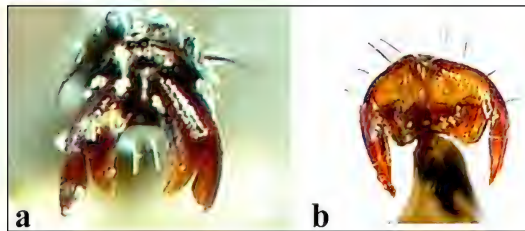
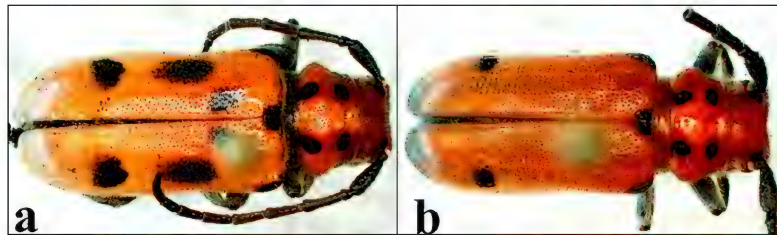


Key

- 270(269')**. Very long setae at apex of most antennomeres that are as long as adjacent antennomeres. Last antennomere abruptly flattened midway and slightly curved (a).....***Tetraopes texanus* Horn**
- 270'**. Setae at apex of antennomeres much shorter than adjacent antennomeres. Last antennomere not modified as above**271**



- 271(270')**. Each elytron typically with four maculae: one small post medial spot at center; one larger oval antemedial spot; one small spot between scutellum and antemedial oval spot; one humeral spot (a) ***Tetraopes tetraphthalmus* (Forster)**
- 271'**. Each elytron typically with two maculae: one very small post medial spot; one very small humeral spot (b)..... ***Tetraopes quinquemaculatus* Haldeman**



- 272(265')**. Tarsal claws symmetrically bifid (a). All but one species mostly covered ventrally and dorsally with gray pubescence**273**
- 272'**. Tarsal claws asymmetrically appendiculate (b). Body never mostly covered ventral or dorsally with gray pubescence (*Oberea*).....**279**

- 273(272')**. Third antennomere longer than pronotum. Elytra black, pronotum with broad black or dark reddish-brown fascia at center, connecting with triangular fasciae on occiput and vertex of head terminating in point between upper eye lobes (a) ***Hemierana marginata* (Fabricius)**
- 273'**. Third antennomere shorter than pronotum. Most of venter and dorsum covered in gray pubescence (*Mecas*).....**274**

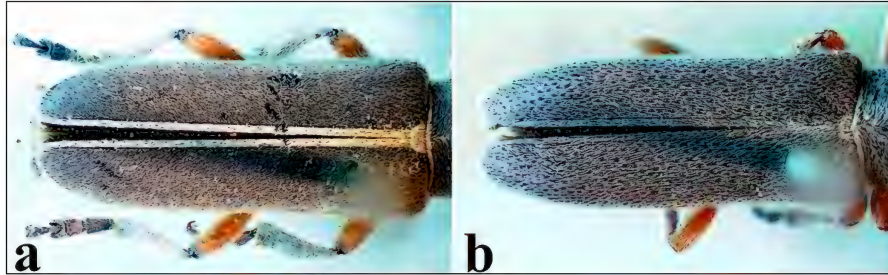


274(273'). Femora pale reddish, only sparsely covered in gray pubescence275

274'. Femora dark, mostly covered in gray pubescence.....276

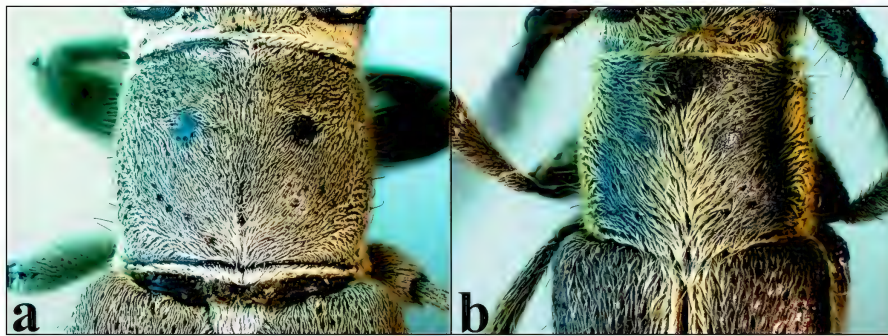
275(274). Elytral suture and outer edge margined with white pubescence (a).....
.....*Mecas pergrata* (Say)

275'. Elytral suture and outer edge without contrastingly colored pubescence (b).....
.....*Mecas femoralis* (Haldeman)



276(274'). Pronotum with two small glabrous spots on disk (a).....277

276'. Pronotum without two small glabrous spots on disk (b)278



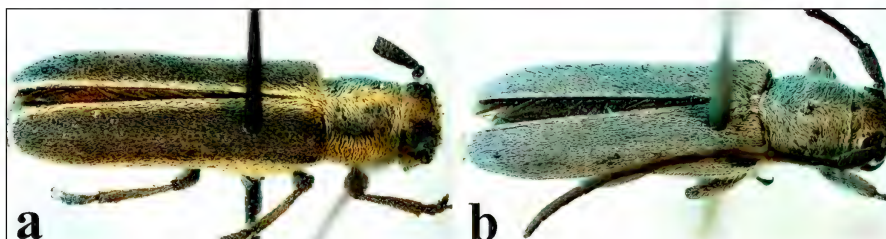
277(276). Suture and outer edge of elytron margined with bright white pubescence (a).....
.....*Mecas cana cana* (Newman)

277'. Suture and outer edge of elytron without contrastingly colored pubescence (b).....
.....*Mecas cana saturnina* LeConte



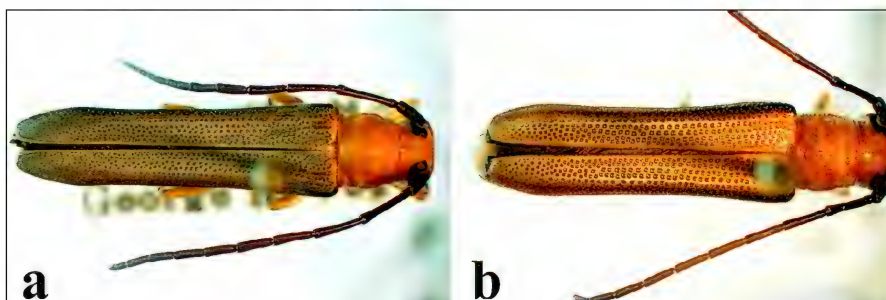
Key

- 278(276'). Elytral suture and outer edge margined with bright white or yellow pubescence. Pronotum with vague white vitta at middle and sides (a).....*Mecas marginella* LeConte
- 278'. Elytral suture and outer edge without contrastingly colored pubescence. Pronotum without white vittae (b).....*Mecas cineracea* Casey



- 279(272'). Pronotum without black calli or other marks. Red head, pronotum, and scutellum, most of venter, and femora (tibiae and antennae black)280
- 279'. Coloration otherwise.....281

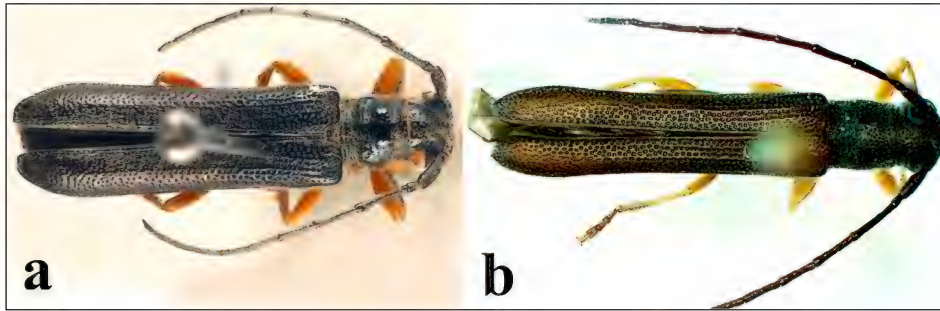
- 280(279). Elytra above gray-brown to black (a).....*Oberea ruficollis* (Fabricius)
- 280'. Elytra above mostly orange to red (b)*Oberea gracilis* (Fabricius)



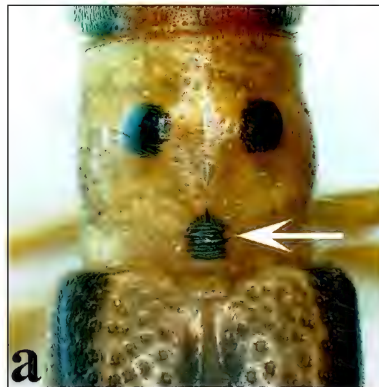
- 281(279'). Pronotum all or mostly dark282
- 281'. Pronotum mostly pale yellow, red, or testaceous, with or without black spots (if mostly dark then two dark, discal spots are vaguely apparent)284
- 282(281). Head mostly pale yellow or red (at least on frons). Pronotum usually with anterior margin pale yellow or reddish. Venter and antennae mostly piceous except for legs and usually last one-two ventrites which are pale reddish yellow (a).....*Oberea delongi* Knull
- 282'. Head and pronotum mostly to entirely dark. Ventral coloration variable283



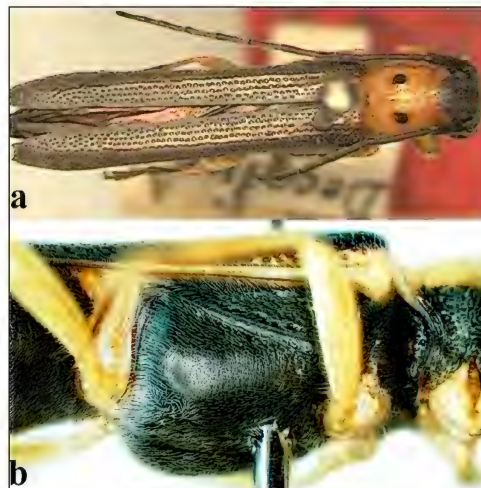
- 283(282')**. Venter of pronotum partially pale, otherwise venter dark. Legs bright orange. Pronotum shiny. (a)..... *Oberea delongi* Knull
- 283'**. Venter uniformly dark. Legs murky yellow. Pronotum dull (b) *Oberea flavipes* Haldeman



- 284(281')**. Pronotum with basal black spot at middle (near scutellum) (occasionally very small) (a).....**285**
- 284'**. Pronotum without basal black spot at middle near scutellum**289**

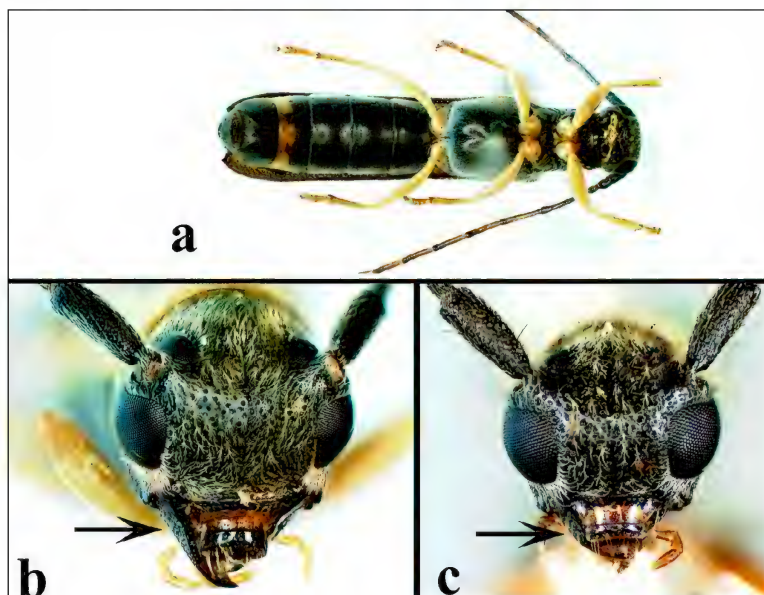


- 285(284)**. Metepisternum red, head mostly dark (a)..... *Oberea ulmicola* Chittenden
- 285'**. Metepisternum black, head variable (mostly pale in most specimens) (b)**286**

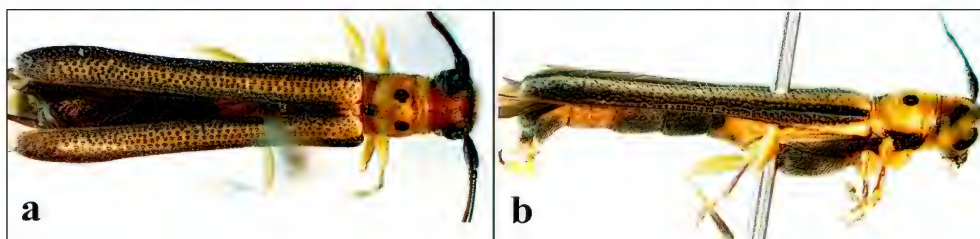


Key

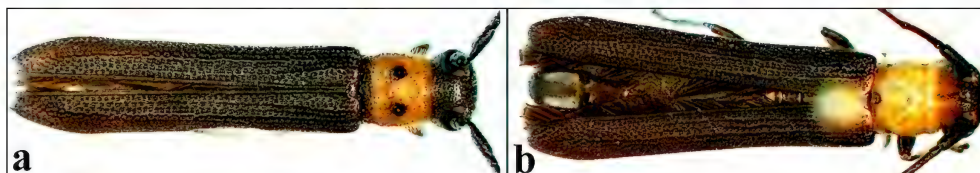
- 286(285')**. Underside of prothorax nearly completely dark (prosternum occasionally mostly pale in aberrant specimens); antennae annulate on at least some apical antennomeres; sternites usually mostly dark (a). Mandibles nearly straight on outer margin of basal two-thirds (b). Scutellum dark (at least posteriorly)..... *Oberea tripunctata* (Swederus)
- 286'**. Underside of prothorax mostly pale with black markings above procoxae; antennae with or without annulations; sternites variably colored. Mandibles evenly curved on outer margin (c). Scutellum color variable**287**

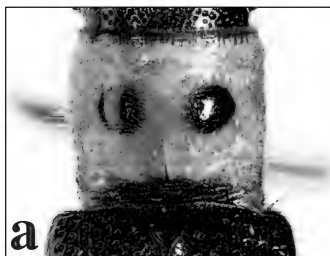


- 287(286')**. Scutellum pale; some abdominal sternites pale; elytra with partially diffuse pale base and sides (a, b) (note: *O. deficiens* Casey is included here as there are no distinguishing characters. This should probably be synonymized with *O. praelonga* Casey)..... *Oberea praelonga* Casey
- 287'**. Scutellum dark. Abdominal sternites uniformly dark. Elytra mostly very dark.....**288**



- 288(287')**. Pronotum usually with two black calli near center. Hairs of elytra pale (a).....
..... *Oberea perspicillata* Haldeman
- 288'**. Pronotum usually with pale calli near center (rarely black). Hairs of elytra dark (possible synonym with *O. perspicillata*) (b) *Oberea affinis* Leng & Hamilton



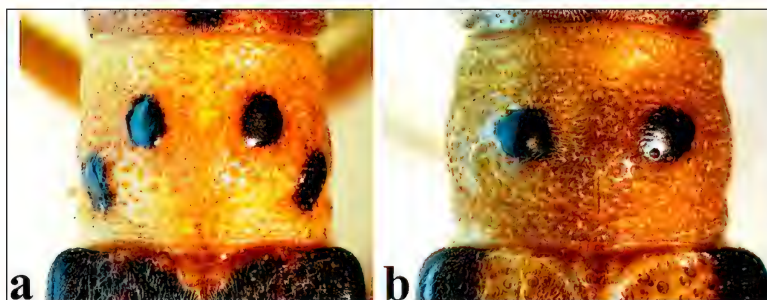


289(284'). Posterior margin of pronotum black or dark brown. Elytra and scutellum black or dark brown (a)*Oberea perspicillata* Haldeman

289'. Posterior margin of pronotum pale yellow, orange, red, or testaceous.....**290**

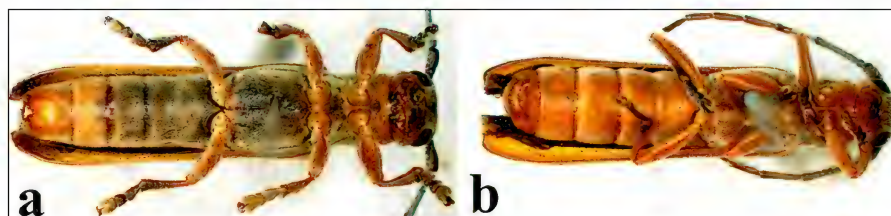
290(276'). Pronotum with four black calli visible from above (two near center and two postero-lateral) (a).....**291**

290'. Pronotum with two black calli visible from above (near center, rarely coalesced into single, large central macula). Lateral black calli, if present, above procoxa and not visible from above (b).....**292**



291(290). First two or three abdominal ventrites nearly completely dark (at least at center), remainder pale yellow or testaceous (a). Vertex and occiput of head usually with dark markings. Posterolateral spot usually larger than central spot*Oberea schaumii* LeConte

291'. Abdominal sternites and head unicolorous, yellow to reddish (b). Head usually without dark markings. Posterolateral spot small, no larger than central spot*Oberea caseyi* Plavilstshikov



292(290'). Prothorax with only two black calli (rarely coalesced into single, large central macula (no lateral black calli present) (a)**293**

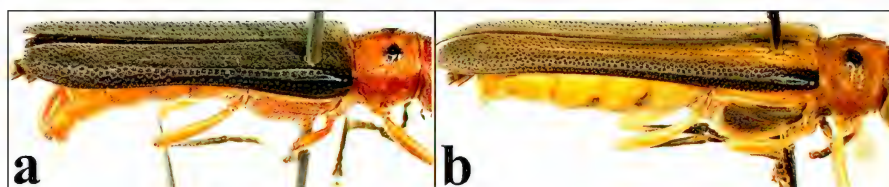
292'. Prothorax with four or five black calli (including one on each side above procoxa) (b)**294**



Key

293(292). Metepisternum red; elytra mostly uniformly dark (a).....*Oberea ocellata* Haldeman

293'. Metepisternum mostly or all black; elytra mostly pale with vague darker infuscations along humeral/epipleural margin and/or suture (b) *Oberea myops* Haldeman



294(292'). Head yellowish to pale reddish (never dark). Metepisternum black (a) (note: *O. deficiens* Casey is included here as there are no distinguishing characters. This should probably be synonymized with *O. praelonga* Casey)*Oberea praelonga* Casey

294'. Head dark reddish usually with dark black infuscations. Metepisternum red (see 285a)*Oberea ulmicola* Chittenden



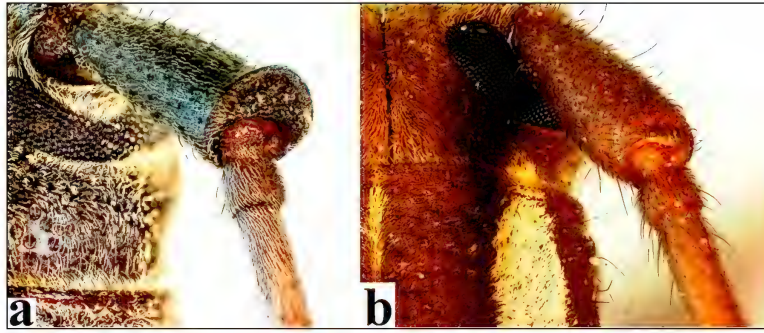
295(264). Integument shiny black with inconspicuous punctation (small, shallow punctures only apparent through high illumination and magnification). Elytra with reticulated, connected patches of very dense white pubescence. Pronotum with two longitudinal bands of white pubescence around central disk region. Pronotum with prominent, acute lateral projections. Antennal scape with weak cicatrix at apex. Most larger than 3 cm long (a)..... *Plectrodera scalator* (Fabricius)

295'. Characters in different combination from above. Most species under 3 cm long296



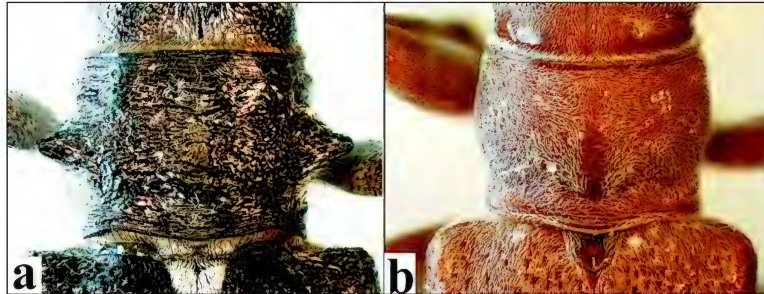
296(295'). Antennal scape with a distinct and obvious cicatrix at apex that is very exposed, somewhat flattened, and punctate or asperate and mostly free of pubescence (a) (Most Lamiini)297

296'. Antennal scape without obvious cicatrix (b)313



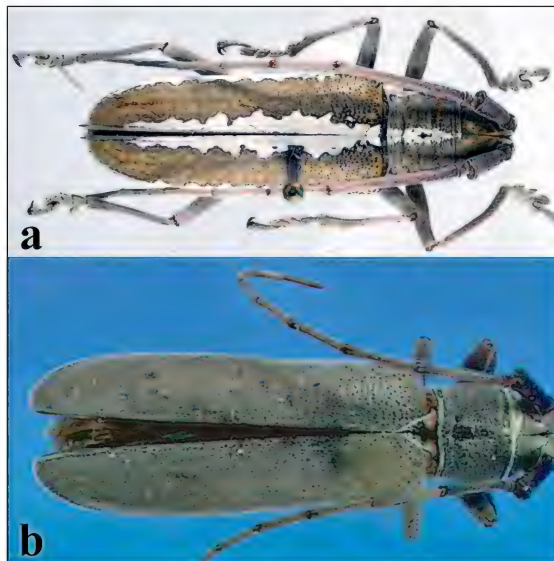
297(296). Prothorax with acute lateral tubercles (a).....**299**

297'. Prothorax without lateral tubercles (b).....**298**



298(297'). Elytra with conspicuous asymmetrical patch of very dense white pubescence along most of suture; very dense white fascia laterally from antennal tubercle, through eye lobe connection to side of head, along side of prothorax and continuing along sides of elytra. Pronotum longer than wide (a) *Neoptychodes trilineatus* (Linnaeus)

298'. Integument without patches of white pubescence. Pronotum wider than long (b, photo courtesy of FSCA) *Hebestola nebulosa* Haldeman



Key

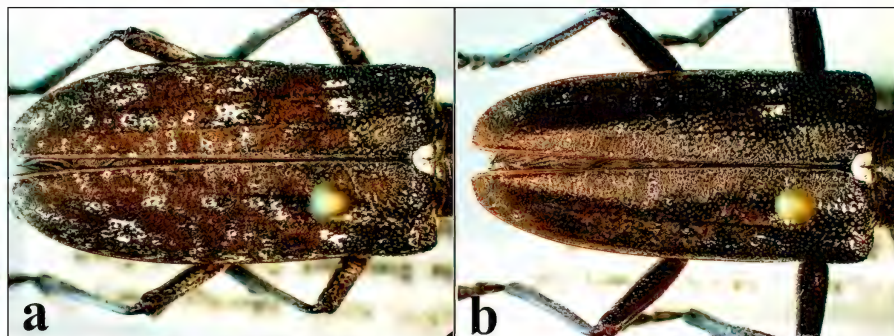
- 299(297)**. Integument black, shiny, impunctate, mostly glabrous except for small white patches widely scattered on elytra and white or pale blue vestiture on venter, tarsi, and basal third to half of most antennomeres (a) (introduced from Asia)*Anoplophora glabripennis* (Motschulsky)
- 299'**. Integument color and/or pubescence in different combination**300**



- 300(299')**. Integument dark reddish brown to black, mostly covered in short gray pubescence; pubescence on elytron interrupted by coarse, confluent punctures and a small round, glabrous spot just postmedially. Length rarely over 12 mm (a).....*Microgoes oculatus* (LeConte)
- 300'**. Integument color and/or pubescence in different combination. Length rarely under 12 mm**301**



- 301(300')**. Integument black or very dark reddish brown. Scutellum with dense, bright white pubescence. Elytra either with a few patches of white pubescence or without. Inconspicuous but dense, gold pubescence coating most of surface of apical half of elytra (a [female], b [male]).....*Monochamus scutellatus* (Say)
- 301'**. Integument light to dark reddish brown. Scutellum with off-white to brown pubescence, not as dense or bright white as in former species. Elytral pubescence in different color and/or distribution**302**



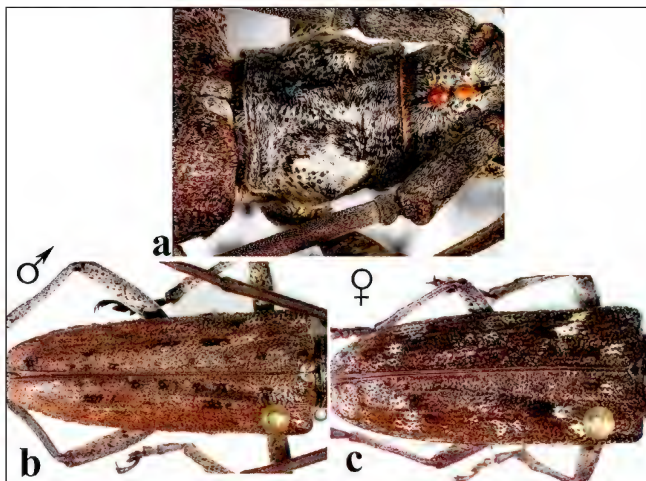
- 302(301')**. Elytral apex with suture produced into weak point or spine (a, b) (most *Monochamus*)**303**
- 302'**. Elytral apex rounded, not produced into point or spine at suture (c) (most *Goes*).....**306**



- 303(302)**. Elytral pubescence comprised of fulvous and white interconnected patches with shiny interspaces that lack pubescence (a). Basal one-third of elytra lacking staggered small rectangular patches of white or yellow pubescence. Elytral apex narrowed to a point (see also 302a above)*Monochamus marmorator* Kirby
- 303'**. Elytral pubescence of different color and/or pattern. Elytra lacks scattered large shiny spaces free of pubescence. Elytral apex with small, pointed sutural extension or spine. In most specimens, basal one-third of elytra with staggered small rectangular patches of white or yellow pubescence**304**

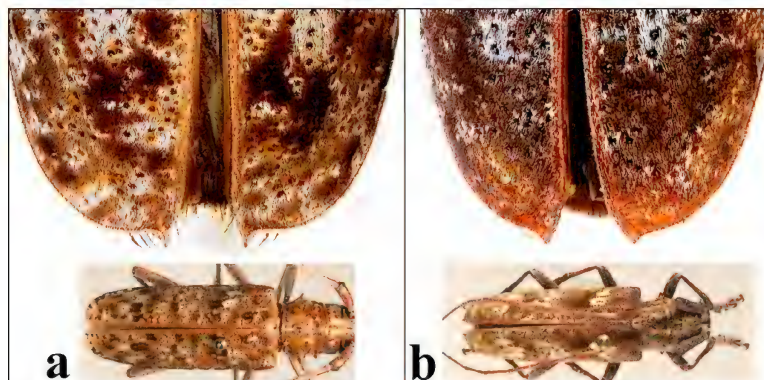


- 304(303')**. Pronotal tubercles with dense white or off-white pubescence around most of their base. Elytra with fairly distinct patches of white or yellow pubescence at most restricted to anterior one-third and posterior one-third. Middle of elytra without defined pubescence patches (a, b, c).....*Monochamus notatus* (Drury)
- 304'**. Pronotal tubercles with pubescence only partially covering their base. Elytra with fairly distinct patches of white or yellow pubescence throughout**305**



Key

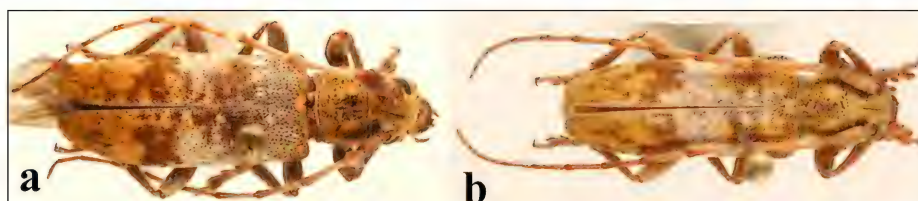
- 305(304')**. Suture produced into strong (but sometimes blunt) spine. light reddish brown integument with mottled patches of white, yellow, and dark brown pubescence (a).....*Monochamus titillator* (Fabricius)
- 305'**. Suture produced into weak projection. Dark reddish brown integument with less distinct mottled patches of white, yellow, and dark brown pubescence (b).....*Monochamus carolinensis* (Olivier)



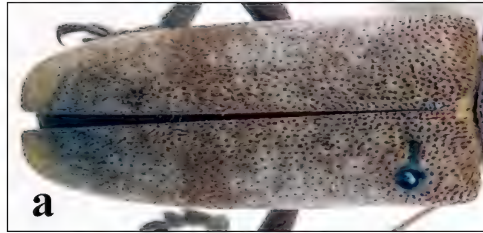
- 306(302')**. Much of dorsum with pale orange pubescence interrupted by transverse sections on elytra of darker brown and/or white pubescence (e.g., see 307a)**307**
- 306'**. Dorsum with pubescence of different color and/or distribution.....**309**
- 307(306)**. Integument lacking white pubescence (a). Venter nearly completely and densely clothed in pale orange pubescence *Goes pulcher* (Haldeman)
- 307'**. Integument with white pubescence on portion or all of anterior half of elytra. Venter clothed in mixture of white and pale orange pubescence.....**308**



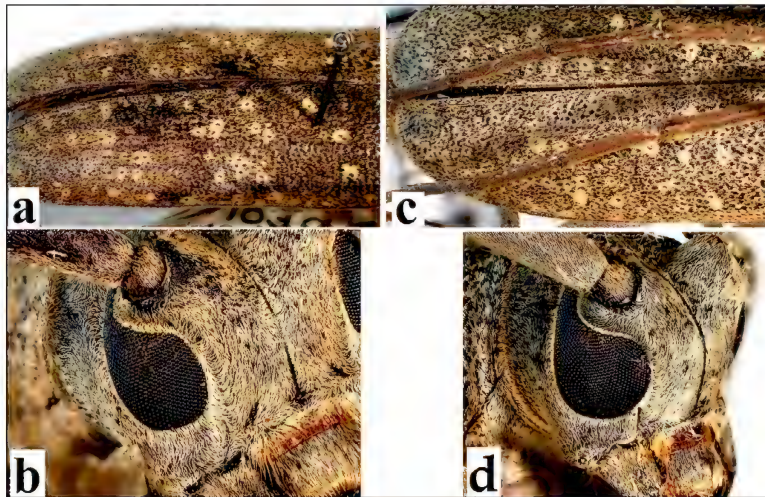
- 308(307')**. Most of basal half of elytra with mottled white pubescence (a) *Goes debilis* LeConte
- 308'**. White pubescence of elytra restricted primarily one-third section antemedially, and sometimes extending along suture (b)..... *Goes variegatus* Linsley & Chemsak



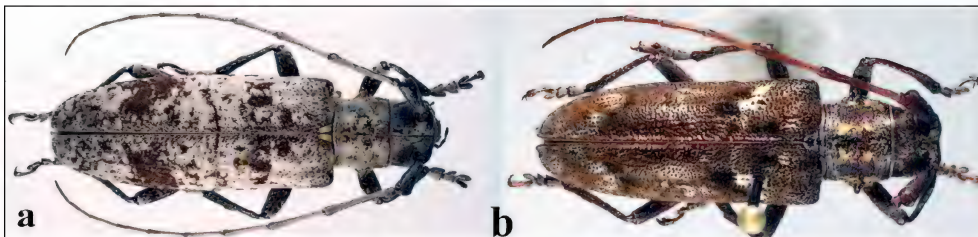
- 309(306')**. Elytral pubescence light colored only (white or very light tan) (e.g., see *310a*)**310**
- 309'**. Elytral pubescence includes either some small patches or extensive covering of brown pubescence, in addition to light colored pubescence**312**
- 310(309)**. Elytral pubescence mostly uniform with a few vague scattered, denser patches, not forming distinct round spots (a)..... *Goes pulverulentus* (Haldeman)
- 310'**. Elytral pubescence with distinct round, denser spots**311**



- 311(310')**. Suture with brighter white pubescence than remainder of elytron (a). Lower eye lobe not very rounded, especially ventrally (b) *Goes tessellatus* (Haldeman)
- 311'**. Suture without differently colored pubescence from remainder of elytron (c). Lower eye lobe more evenly rounded (d)..... *Goes tumifrons* Chemsak & Linsley



- 312(309')**. Majority of dorsal surface covered in white or pale gray pubescence. Antennae with dense coating of pale pubescence obscuring most of surface (a) *Goes tigrinus* (DeGeer)
- 312'**. White patches occupying much less than half of dorsal surface. Antennae with pubescence not obscuring surface (b) *Monochamus notatus* (Drury)



Key

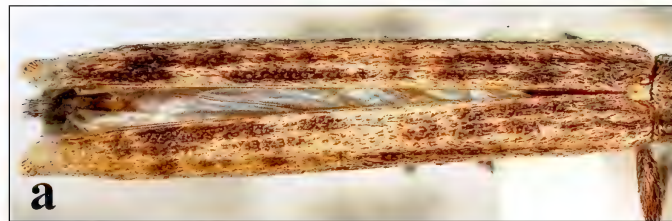


313(296'). Head with unusual shape: triangular from lateral view with antennal tubercles sticking anteriorly and front angle and mouthparts removed to extreme posterior margin ventrally; as long as pronotum from antennal tubercles to posterior margin. Eyes small, round, far removed from antennae: about half way between antennal tubercles and mouthparts (a) (*Spalacopsis*, included species known only from Florida in the US).....**314**

313'. Head, eye, mouthparts without configuration of above**317**

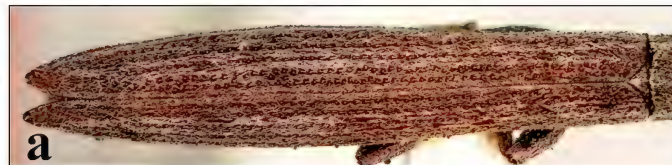
314(313). Elytra of similar width until apex; suture not fused. Pubescence moderately dense and mottled (a).....*Spalacopsis filum costulatum* Casey

314'. Elytra wider at middle than base and apex; suture mostly fused. Pubescence variable, mottled or not (e.g., see 315a)**315**



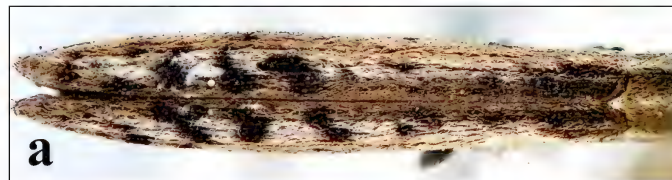
315(314'). Pubescence mostly of uniformly colored, unmottled appearance, interrupted only by longitudinal rows of punctures on elytra (a)..... *Spalacopsis chemsaki* Tyson

315'. Pubescence mottled with light and dark hairs**316**



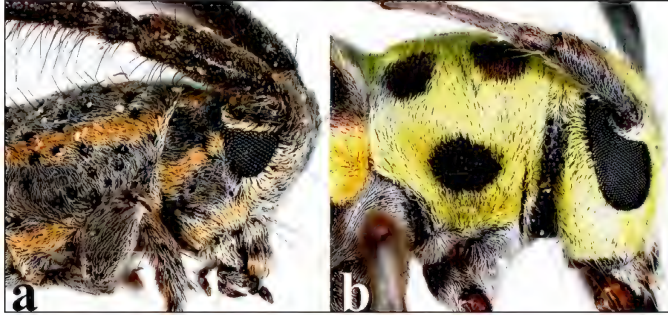
316(315'). Pubescence dense over most of integument, never denuded along suture or costal intervals (a) *Spalacopsis stolata* Newman

316'. Pubescence moderately dense of most of integument but with denuded areas along suture and costal intervals of elytra (no photo available).....*Spalacopsis suffusa* Newman



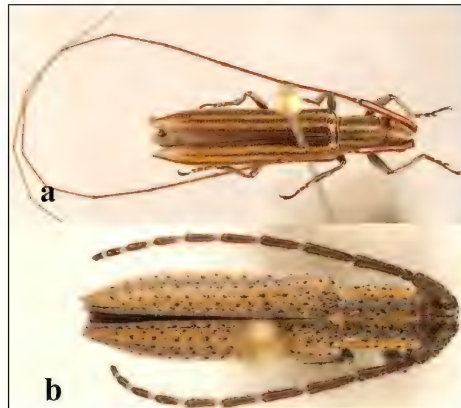
317(313'). Head somewhat triangular from lateral view, with antennal tubercles extended anteriorly, and mouthparts posteriorly, but overall, head shorter than pronotum (a). Elytra with 2-3 longitudinal vittae of lighter colored pubescence (golden-yellow or pale orange), that continue onto pronotum as 3-4 separate vittae (as in *318a, b*). Eye emarginate around insertion of antenna**318**

317'. Head of normal shape and size, generally vertical, or nearly so, from tubercles to labrum (b). Most species without longitudinal elytral pubescent vittae, but at most, only two present. Other characters not present in above combination**319**



318(317). Antennae very long, reaching elytral apex by fifth or sixth antennomere. Elytra without long, erect hairs (a) *Hippopsis lemniscata* (Fabricius)

318'. Antennae short, about as long as body. Elytra with numerous long, erect black hairs (b).....
.....*Dorcasta cinerea* (Horn)



319(317'). Base of elytron with acute dorsal tubercles. Pronotum highly arched. Eye lobes divided. Antlike and very minute, about 3-4 mm or less (a) *Cyrtinus pygmaeus* (Haldeman)

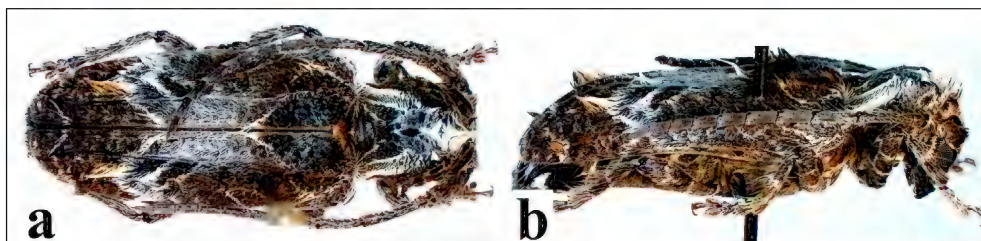
319'. Base of elytron without acute dorsal tubercles. Pronotum usually not arched. Almost all species larger and without divided eyes**320**



Key

320(319'). Integument covered with dense pubescence that is formed into long tufts projecting from anterior of pronotum, middle of apical third of elytron, vertex of head, tibiae, etc. Elytra with distinct arcuate longitudinal costa somewhat parallel to suture. Antennae shorter than elytra, consecutive antennomeres shorter beyond third (a, b)*Desmiphora hirticollis* (Olivier)

320'. Integument without such dense pubescence and lacking tufts as above. Elytral costae, if visible, in different configuration. Antennal length variable**321**



321(320'). Scape very short and thickened, not attaining posterior margin of head; covered with numerous sharp bumps (asperites) that are mostly exposed from pubescence (a). Antennae very long, usually reaching elytral apex by fifth or sixth antennomere (*Dorcaschema*)**322**

321'. Scape of different shape, size, and lacking prominent coating of asperites. Antennal length variable**325**

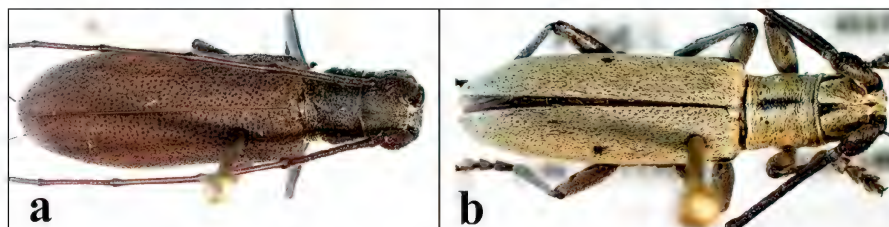


322(321). Coloration mostly uniform without mottled or spotted pubescence**323**

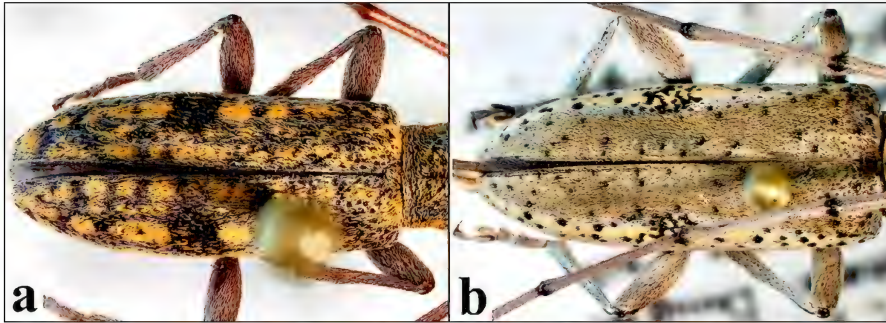
322'. Coloration not uniform; pubescence broken in parts by mottling, glabrous spots, or vittae...**324**

323(322). Black or very dark reddish brown (a).....*Dorcaschema nigrum* (Say)

323'. Gray with small region at center of pronotum and center of occiput of head with glabrous black integument exposed (b).....*Dorcaschema cinereum* (Olivier)



- 324(322')**. Numerous orange patches of pubescence over elytral surface, mottled with pale or brown patches. Elytral surface with only a few glabrous spots, if any (a).....
.....*Dorcaschema alternatum* (Say)
- 324'**. Dorsal surface of elytra with pale olive green pubescence. Sides of elytra with vittae of white and orange pubescence. Numerous round, glabrous spots present on elytral surface (b).....
.....*Dorcaschema wildii* Uhler



- 325(321')**. Pronotum with sides unarmed; no spines or angled projection at side (although a rounded bulge present in some genera) (a) (note: This character is variable or easy to be misinterpreted in some species of several Acanthocinini genera including *Astylopsis*, *Leptostylopsis*, and *Leptostylus*, among others, that have lobed pronotal sides. They are, therefore, included in both sections of the key)**326**
- 325'**. Pronotum with acute angle to spine at side, usually around middle (b, c)**369**

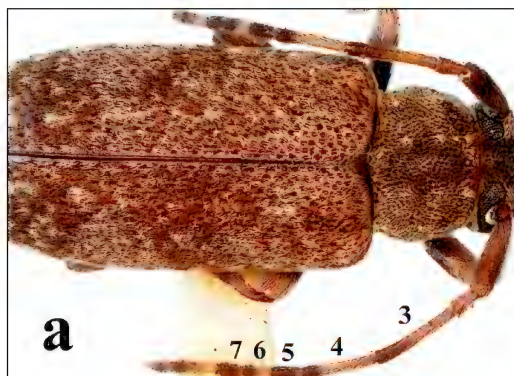


- 326(325)**. Elytron at base with large, blunt projection. One or two oblique, transverse white fasciae present on elytron (one postmedial and usually a smaller one antemedial). Small, ant-like facies, most specimens 4-7 mm (a)..... *Psenocerus supernotatus* (Say)
- 326'**. Elytra without above configuration and pubescent fasciae. Most species larger and not appearing ant-like**327**



Key

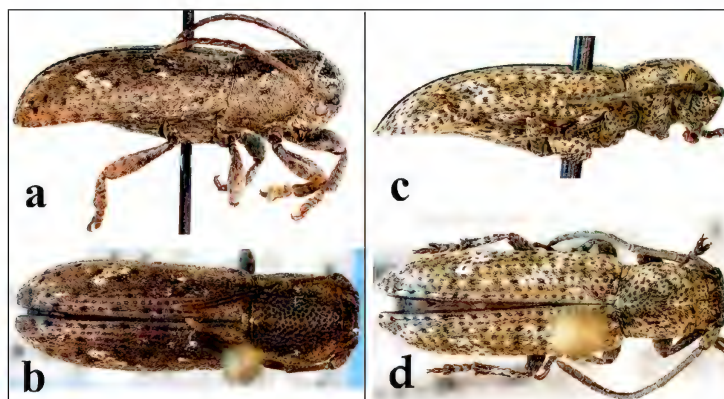
- 327(326').** Antennae with unusual annulations: fourth antennomere dark annulate at apex, 5th antennomere nearly completely dark, 6th antennomere dark annulate at apex, 7th antennomere nearly completely dark. Small species, less than 5 mm (a) *Zaplous annulatus* (Chevrolat)
- 327'.** Antennae either annulate in the typical way (adjacent antennomeres with similar annulations at base or apex), or non-annulate. Most specimens larger than 5 mm.....**328**



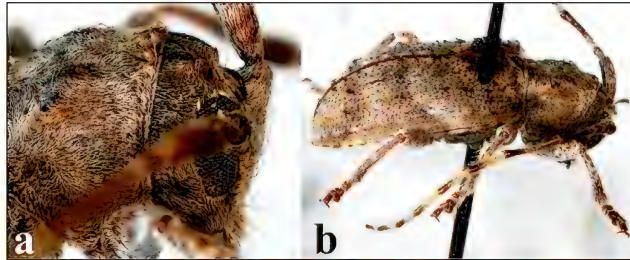
- 328(327').** Antennae, at most, little more than half length of body. Antennomeres after fourth very short. Eye lobes divided or very widely separated, connected by only a thin line (a)**329**
- 328'.** Antennae two-thirds length of body or longer. Antennomeres not abruptly shortened. Eyes not as strongly emarginate and lobes not separated.....**330**



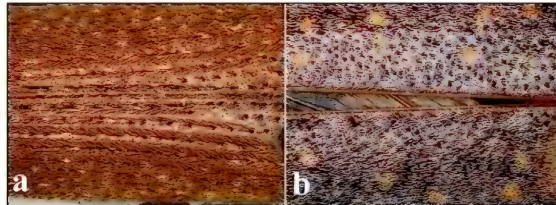
- 329(328).** Metasternum short; distance between meso and metacoxae about the same as distance between procoxae and mesocoxae (a). Humeral angles absent, flightless species with reduced hind wings (b) (known only from Florida) *Parmenonta thomasi* Chemsak & Linsley
- 329'.** Metasternum longer; distance between meso and metacoxae greater than distance between procoxae and mesocoxae (c). Small humeral angles present, hind wings fully developed (d) *Adetus brousi* (Horn)



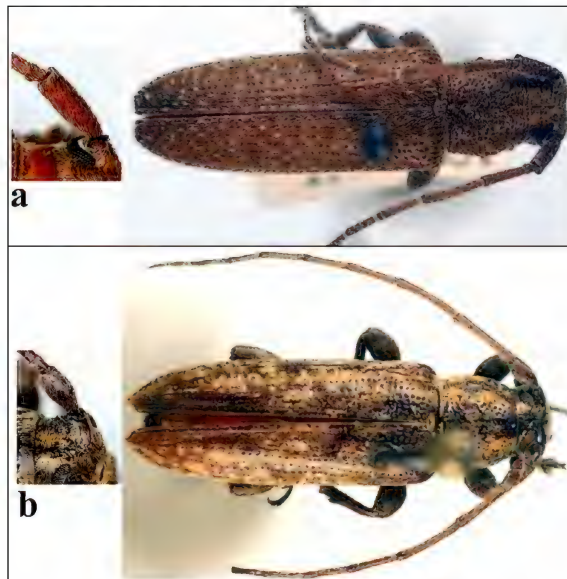
- 330(328')**. Area of head posterior to upper eye lobes strongly and abruptly raised far above level of eye (a). Elytra with numerous small tufts of longer pubescence than surrounding areas. Antennomeres annulate, with fringe of long pubescence on inner margin (b). Elytra with darker chevron macula at basal one-fourth.....*Ecyrus dasycerus* (Say)
- 330'**. Posterior part of head not abruptly raised above level of eye. Other characters not present in combination**331**



- 331(330')**. Elytra with punctures mostly in separate longitudinal rows, each row separated by shiny, convex, impunctate, longitudinal region between (partially obscured by pubescence) (a). Pronotum with deep, large punctation**332**
- 331'**. Elytra with punctures not confined in rows and without narrow, longitudinal rows of impunctate regions (b). Pronotum with punctation variable, usually not very conspicuous.....**333**

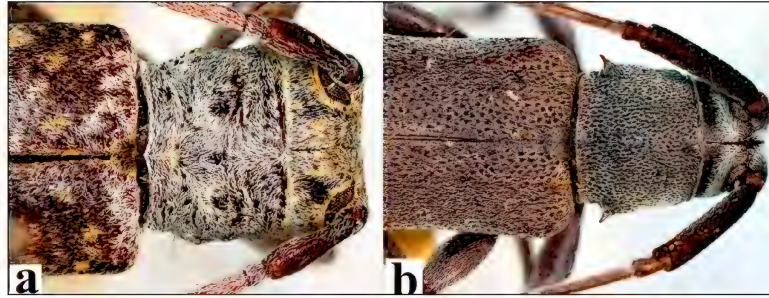


- 332(331)**. Scape about as thick at middle as apex (a). Pronotum usually with a little projection at middle of sides (known only from Florida).....*Ataxia falli* Breuning
- 332'**. Scape much thicker at middle than apex (b). Pronotum without any projection at sides (introduced into Florida from Asia or Hawaii)*Sybra alternans* Wiedemann



Key

- 333(331')**. Scape short, sometimes clavate, not extending beyond apical one-third of pronotum (a)**334**
- 333'**. Scape long, slender, only slightly and gradually enlarged apically; extending to about halfway point of pronotum or beyond (b) (Acanthocinini, in part)**351**



- 334(333)**. Elytra with dozens of small, round, randomly scattered spots of orange pubescence. Much of integument with gray pubescence, often forming broad, antemedial transverse band on elytra (a) *Oncideres cingulata* (Say) **335**
- 334'**. Elytra without pubescence as above**335**

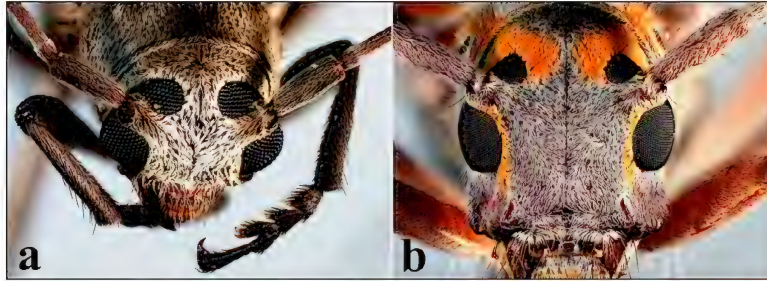


- 335(334')**. Antennae with third and fourth antennomeres very long and broadly annulate at basal half with pale gray pubescence. Remainder of antennae dark, apical antennomeres much shorter than third and fourth. Entire body and appendages with long scattered hairs and short mottled pubescence (a) *Eupogonius annulicornis* Fisher
- 335'**. Antennae without annulations as above. Long hairs usually sparse, especially on antennae. Appressed elytral pubescence uniformly colored or with distinct patterns, never mottled**336**



336(335'). Eyes coarsely faceted; lower eye lobe occupying nearly all of gena, extending to near genal margin (a). Elytra with two to three short, longitudinal white pubescent fasciae, mostly in a row *Lypsimena fuscata* Haldeman

336'. Eyes finely faceted; lower eye lobe smaller and well removed from genal margin (b). Elytra without pubescent fasciae as above (*Saperda*) **337**



337(336'). Elytra with uniform pubescence, without patterns or maculae **338**

337'. Elytra with pubescence forming maculae or vittae **341**

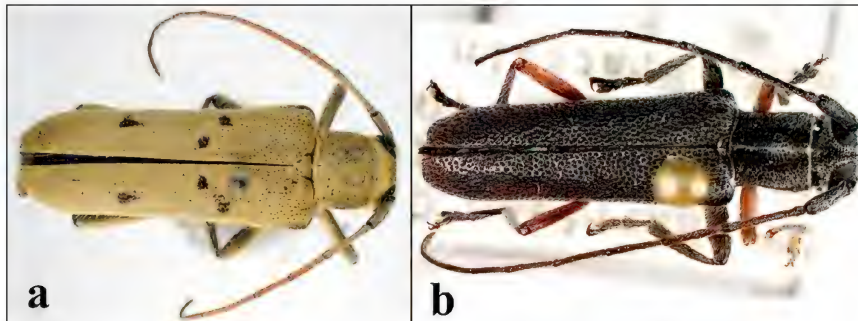
338(337). Integument mostly black. Elytra with very large confluent punctation (a)
..... *Saperda populnea moesta* LeConte

338'. Elytra and appendages differently colored. Punctuation not as prominent on elytra **339**



339(338'). Elytra, pronotum, venter, and legs mostly gray or green. Pronotum without a distinct, white longitudinal pubescent vitta at middle (a) **340**

339'. Legs (mostly), and sometimes elytra and pronotum, mostly pale reddish. Pronotum usually with a white longitudinal pubescent vitta at middle (b) *Saperda discoidea* Fabricius



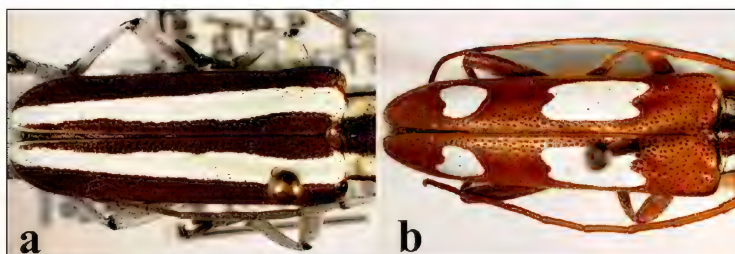
Key

- 340(339). Antennae with uniform pubescence and without annulae (see 339a above).....*Saperda vestita* Say
- 340'. Antennae with annulae of pubescence on most antennomeres (a) *Saperda inornata* Say



- 341(337'). Elytra and pronotum with large patches or longitudinal vittae of very dense, bright white pubescence342
- 341'. Elytra and pronotum without patches of bright white pubescence.....343

- 342(341). White elytral pubescence in form of broad longitudinal stripe (a).....*Saperda candida* Fabricius
- 342'. White elytral pubescence in form of two (rarely one) large maculae (b).....*Saperda cretata* Newman

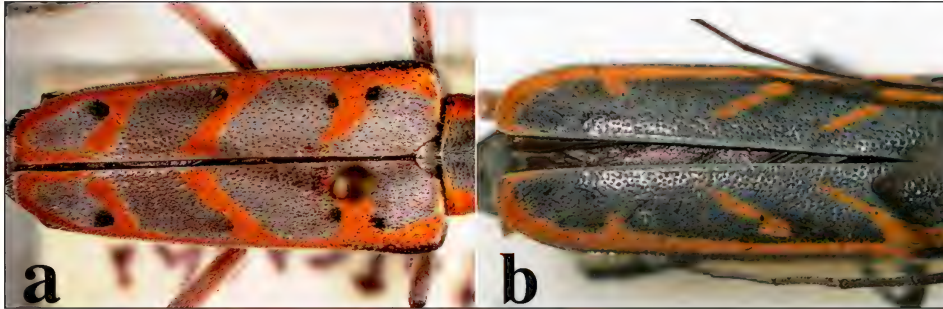


- 343(341'). Pronotum black or gray at center of disk, with longitudinal bands of orange pubescence on lateral margins344
- 343'. Pronotum not black or gray at center of disk, and if longitudinal bands of orange pubescence are present, they are not restricted to lateral margins346
- 344(343). Elytra with transverse or oblique bands of orange pubescence345
- 344'. Elytra without transverse or oblique bands of orange pubescence (only a longitudinal band around margin and suture) (a)..... *Saperda lateralis* Fabricius



345(344). Basal-most orange band on elytra transverse at least for half its length. Black spots often present around base of transverse and oblique bands (a)*Saperda tridentata* Olivier

345'. Basal-most orange band on elytra angled completely. Black spots lacking around orange bands (b) *Saperda imitans* Felt & Joutel



346(343'). Pronotum with bright yellow pubescence except for four black spots. Elytral margin and suture with bright yellow pubescence (a)*Saperda puncticollis* Say

346'. Pronotum and elytral margins without bright yellow pubescence**347**



347(346'). Elytra with uniform, dense green or greenish-gray pubescence except for two-three small black, glabrous spots, each. Pronotum without longitudinal pubescent vitta at middle (a) *Saperda vestita* Say

347'. Elytra without pubescence as described. Pronotum with longitudinal vitta at middle (rarely vaguely defined).....**348**



Key

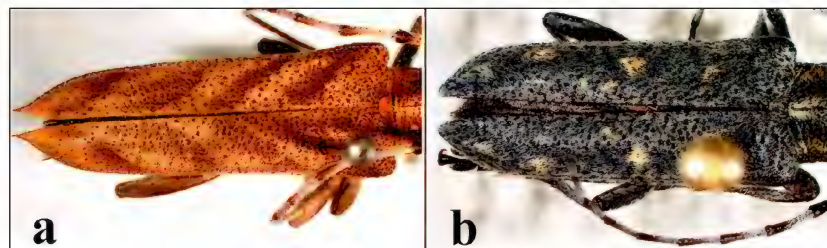
- 348(347')**. Legs mostly glabrous, pale reddish. Each elytron with vague, slightly post-medial transverse pale fascia. Elytral apices rounded (a)..... *Saperda discoidea* Fabricius
- 348'**. Legs mostly pubescent, dark red to gray or black. Elytra with maculae in different pattern. Elytral apices slightly pointed to spined**349**



- 349(348')**. Antennae without annulations (only vaguely darker on apex of some antennomeres). Gray pubescence of most of integument with numerous large, black punctures on elytra and pronotum. Vague spots of pale orange pubescence evenly distributed on elytron. Pronotum with three longitudinal bands of pale orange pubescence (a)..... *Saperda calcarata* Say
- 349'**. Antennae with distinct, dark annulations at apex of most antennomeres. Elytral and/or pronotal pubescence in different pattern.....**350**

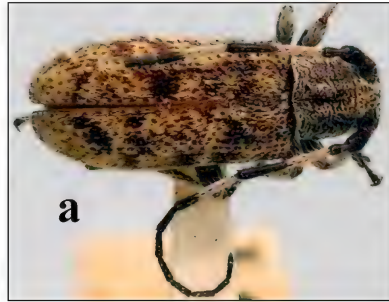


- 350(349')**. Pubescence rusty red in color, with about 4 oblique transverse bands connecting to suture on elytron. Elytral apices tapering to a spine (a) *Saperda obliqua* Say
- 350'**. Pubescence pale gray or yellow over black integument. Elytral pubescence contains irregularly sized and placed spots. Elytral apices tapering to a point without a spine (b).....
..... *Saperda mutica* Say



351(333'). Antennae with third and fourth antennomeres very long and broadly annulate at basal half with pale gray pubescence. Remainder of antennae dark, apical antennomeres much shorter than third and fourth. Entire body and appendages with long scattered hairs and short mottled pubescence (see 335a) *Eupogonius annulicornis* Fisher

351'. Antennae differently colored or not annulate. Body and appendages at most with only sparse long, erect setae **352**



352(351'). Elytra with dozens of small, round, randomly scattered spots of orange pubescence. Much of integument with gray, unmottled pubescence, often forming broad, antemedial transverse band on elytra (see 334a)..... *Oncideres cingulata* (Say)

352'. Elytra usually without orange pubescence. Elytral pubescence mottled or patterned differently **353**

353(352'). Upper eye lobes very close together, separated by less than the width of the upper eye lobe (a). Pronotum with yellow-brown pubescent bands or elongated spots, remainder darker *Nyssodrysina haldemani* (LeConte)

353'. Upper eye lobes more widely separated, by more than the width of the upper eye lobe (b). Pronotal pubescence variable **354**



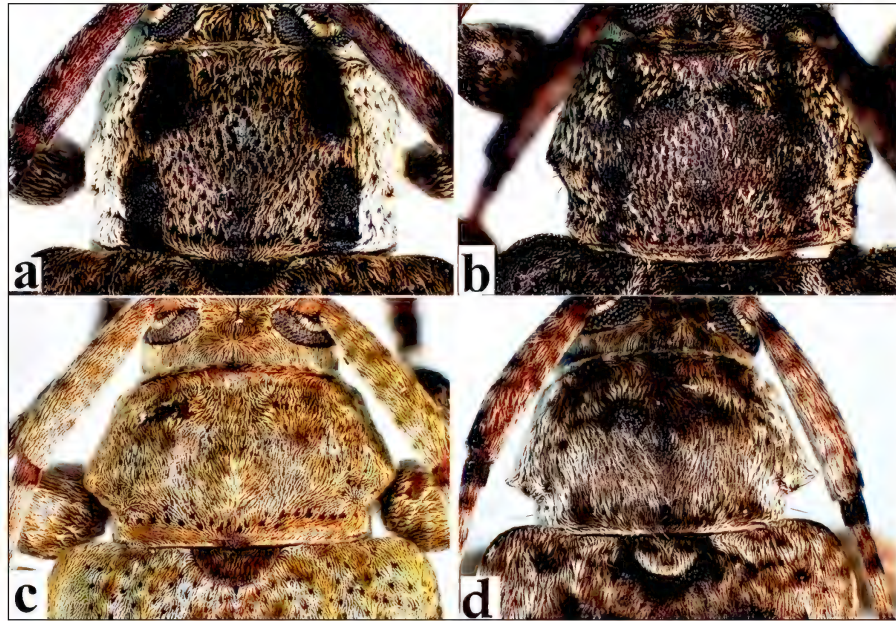
354(353'). Prothorax with 7-8 longitudinal narrow fasciae of tan setae (three rows visible on each side, 1-2 at middle of disk.) Elytra and antennae with scattered erect, thick black setae. Elytral apex strongly pointed on outer edge (a) (known only from Florida in the US)..... *Alcidion umbraticus* (Jacquelin du Val)

354'. Prothorax with pubescence in different pattern. Elytra and antennae without erect, black setae. Elytral apex weakly pointed, obliquely truncate, or subtruncate..... **355**

Key

355(354' & 398'). Pronotum with numerous large, evenly scattered punctures over nearly all of surface (sometimes evidenced by regular interruptions in pubescence that otherwise hide punctures). Elytra, especially at basal half, with numerous large punctures (sometimes mostly obscured by pubescence) (a, b) (*Astylopsis*)**356**

355'. Pronotum with few large punctures, limited at most to transverse row near posterior margin, and regions of unevenly scattered punctures elsewhere. Elytra with punctures smaller and less conspicuous (c, d)**361**

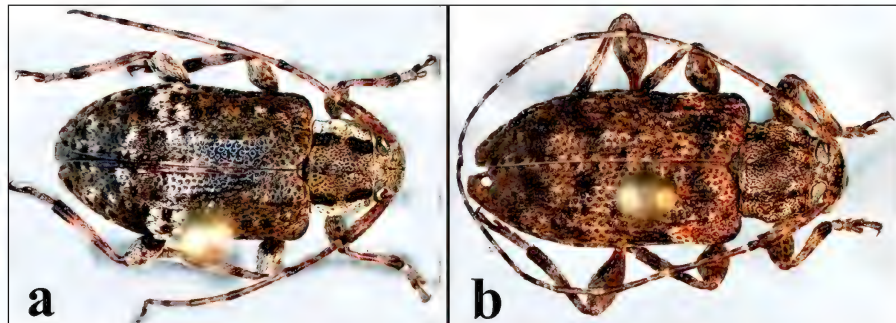


356(355). Scutellum black, almost always darker than periscutellar region**357**

356'. Scutellum gray to reddish brown, similar in color to periscutellar region**358**

357(356). Elytra with large mottled gray or white, postmedial transverse macula (a).....
.....*Astylopsis macula* (Say)

357'. Elytra with, at most, few small spots of gray or white maculae (b).....
.....*Astylopsis sexguttata* (Say)



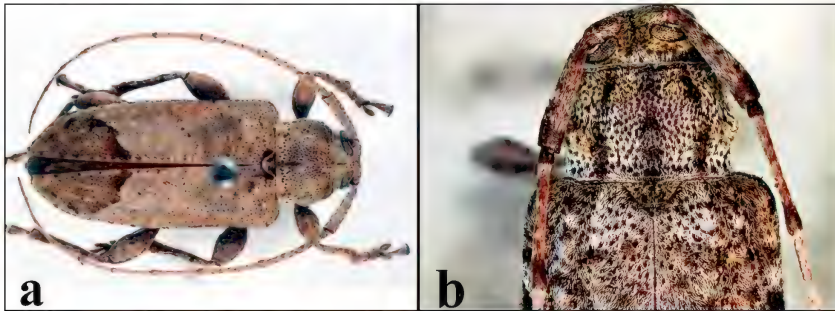
358(356'). Elytral epipleuron black and strongly contrasting from adjacent integument (a).....
 *Astyloopsis arcuatus* (LeConte)

358'. Elytral epipleuron gray to brown, not contrasting from adjacent integument.....**359**



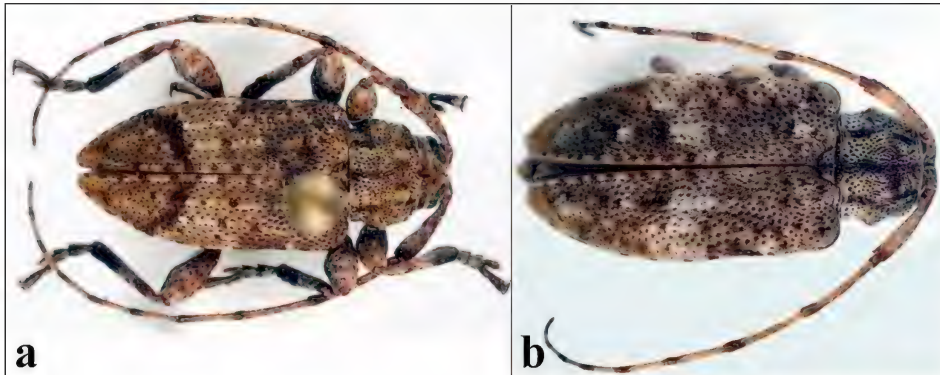
359(358'). Apex of scape and most antennomeres not distinctly darker from remaining areas (mottled but not annulate) (a). Most specimens over 1 cm in length..... *Astyloopsis perplexa* (Haldeman)

359'. Apex of scape and most antennomeres distinctly darker from remaining areas (mottled and annulate) (b). Most specimens under 1 cm in length.....**360**



360(359'). Apical one-third of elytra with narrow, angled black or brown transverse macula extending from suture to outer margin (or near) (a)..... *Astyloopsis fascipennis* Schieffer

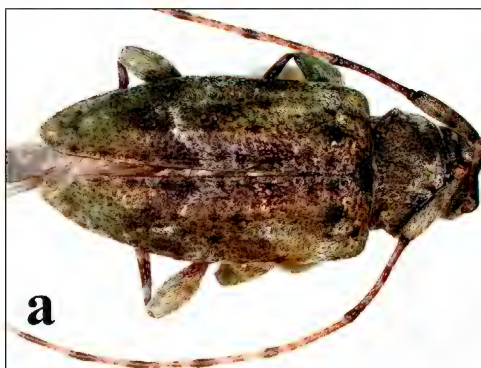
360'. Apical one-third of elytra without distinct black transverse macula (b).....
 *Astyloopsis collaris* (Haldeman)



Key

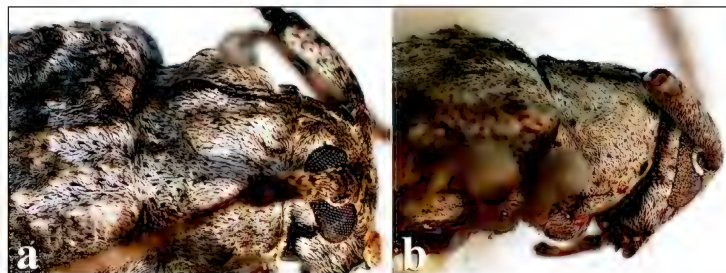
361(355'). Integument pubescence with distinctive greenish tinge. Elytron with angled transverse, dark postmedial fascia (maybe subtle) and a raised black, pubescent callus posterolateral to scutellum (a)*Astylidius parvus* (LeConte)

361'. Integument without greenish tinge. Elytral calli and white fasciae variable**362**



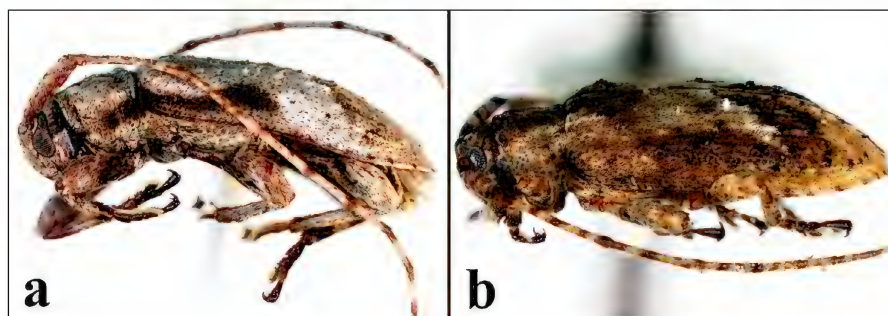
362(361'). Pronotum with distinct dorsal tubercles (usually at least 5) best viewed from lateral perspective (a) (*Leptostylopsis*, *Leptostylus*)**364**

362'. Pronotum without distinct dorsal tubercles (at most 3 vaguely raised areas) (b) (*Styloleptus*)**363**



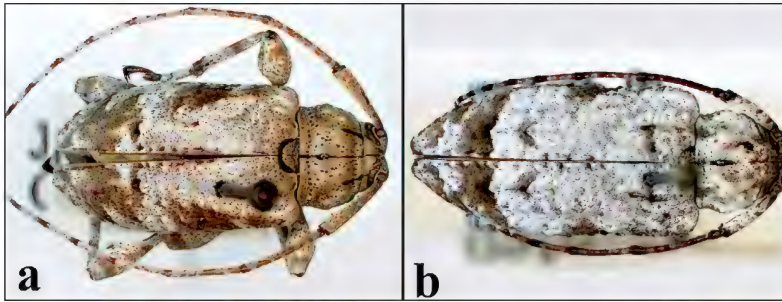
363(362'). Sides of pronotum (at least posterolaterally) and usually epipleuron of elytron with dark fascia (a) *Styloleptus biustus* (LeConte)

363'. Sides of pronotum and usually epipleuron of elytron without dark fascia (b).....
..... *Styloleptus biustus* (LeConte), *minuens* form



364(362). Pronotum with thin, glabrous longitudinal line at middle, extending from posterior to anterior margin, and two partial glabrous lines extending from upper eye lobe to basal one-third of pronotum. Integument with white/gray pubescence, usually a partial transverse dark fascia at apical third of elytron, and spots of orange pubescence scattered over elytron (a).....
.....*Leptostylopsis argentatus* (Jacquelin du Val)

- 364'**. Pronotum with, at most, an incomplete glabrous patch at middle. Integumental pubescence not exactly as described, without orange spots (b).....**365**



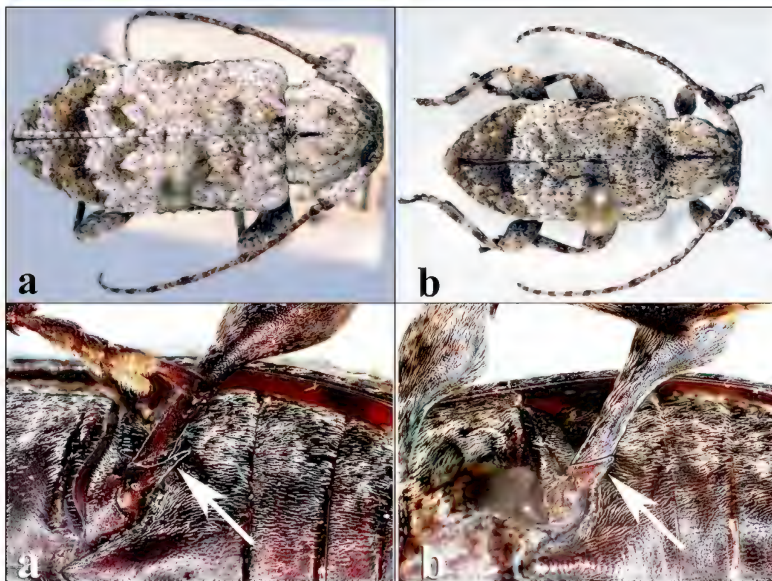
- 365(364')**. Elytra with broad postmedial transverse white fascia (sometimes expanded into most of anterior two-thirds of elytron) (see *364a*)**366**

- 365'**. Elytra with, at most, thin postmedial transverse white fascia (a)**367**



- 366(365)**. Metatrochanter long and with apex extending out away from metafemur (a, bottom). Dorsal habitus somewhat variable, commonly as in a, top.....*Leptostylus asperatus* (Haldeman)

- 366'**. Metatrochanter normal, flush with surface of metafemur (b). Dorsal habitus somewhat variable, commonly as in b, top (note: *Leptostylus hispidulus* Bates would key here, but is excluded since its current presence in the U. S. cannot be confirmed.).....*Leptostylus transversus* (Gyllenhal)

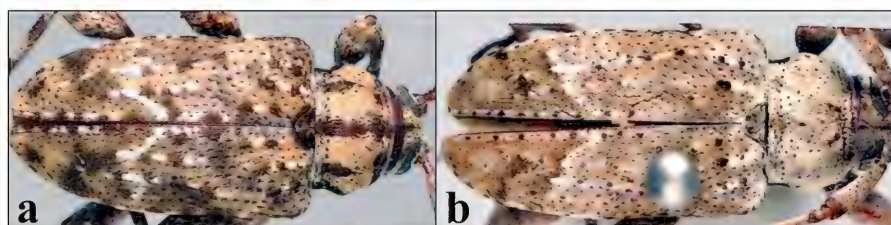


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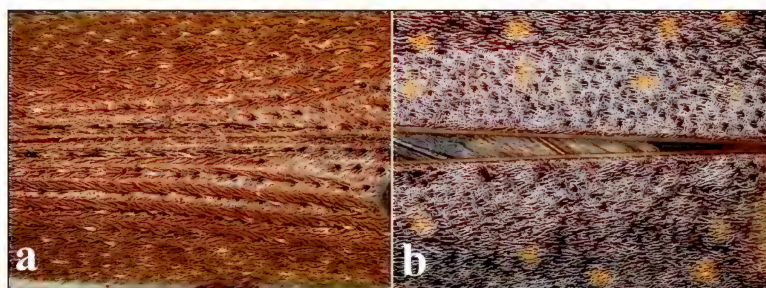
- 367 (365').** Pubescence mostly uniform brownish or tawny with exception of a partial transverse, narrow, black postmedial fascia on elytron. Pronotum with small patches of denser punctures around central disk (a) *Leptostylopsis terraecolor* (Horn)
- 367'.** Pubescence not uniform brownish or tawny, interrupted by white postmedial elytral fascia and black spots or small maculae. Pronotal punctures not in above arrangement**368**



- 368(367').** Pronotum with 1-3 broad longitudinal glabrous regions (a) (known only from Florida in the US)..... *Leptostylopsis albofasciatus* (Fisher)
- 368'.** Pronotum with, at most, 3 very small, glabrous spots (two anteromedially and one posteromedially) (b)..... *Leptostylopsis planidorsus* (LeConte)



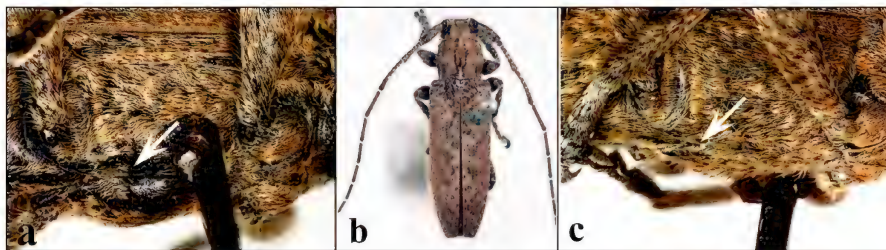
- 369(325').** Elytra with punctures mostly in separate longitudinal rows, each row separated by shiny, convex, impunctate, longitudinal region between (partially obscured by pubescence). Pronotum with deep, large punctation (*Ataxia*) (a).....**370**
- 369'.** Elytra with punctures not arranged in longitudinal rows, or impunctate (b).....**373**



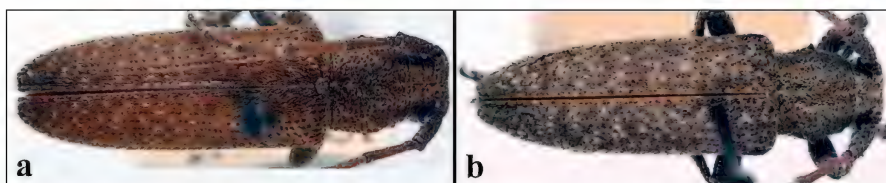
- 370(369)**. Outer elytral apex with long acute point or spine (a). Pronotum often with conspicuous white pubescence at sides (b) (known only from Florida and the West Indies).....
 *Ataxia spinicauda* Schaeffer
- 370'**. Elytral apex rounded to obliquely truncate (c). Pronotum without conspicuous dense, white pubescence at sides**371**



- 371(370')**. Metasternum with deep middle longitudinal sulcus and area around it devoid of pubescence (a). Dorsal habitus as in b.....*Ataxia crypta* (Say)
- 371'**. Metasternum with shallow notch that is mostly covered in normally dense pubescence (c)...**372**



- 372(371')**. Integument reddish brown, covered by mostly uniform pubescence, not appearing very mottled or speckled (a). Raised longitudinal areas between puncture rows shiny and conspicuous without magnification (known only from Florida) (note: *Ataxia operaria* Erichson would key here too and was listed for the southeastern U. S. in some publications, however no U. S. specimens have been seen).....*Ataxia falli* Breuning
- 372'**. Integument dark brown, covered by white and tawny pubescence giving a speckled or mottled appearance (b). Raised longitudinal areas between puncture rows difficult to see without magnification*Ataxia hubbardi* Fisher



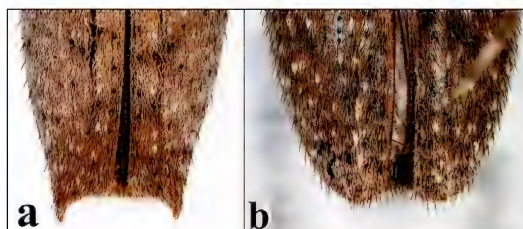
- 373(369')**. Antennae with conspicuous presence of long setae sticking out in many directions along most antennomeres (easily visible from dorsal view) (a, b).....**374**
- 373'**. Antennae with pubescence limited to appressed short coating and a few scattered longer hairs or at most, a fringe of hairs along one side (c).....**380**



Key

374(373). Outer elytral apex with long acute point or spine. Pronotum often with white pubescence at sides (a) *Ataxia spinicauda* Schaeffer

374'. Elytral apex rounded, obliquely truncate, or weakly bidentate (b)**375**



375(374'). Elytral apices truncate to weakly bidentate (a). Elytra with a broad transverse pale fascia antemedially (*Pogonocherus*) (b) (note: *Pogonocherus fasciculatus* (DeGeer), which has been collected at least once in New Jersey, is not included in the key since its establishment cannot be confirmed)**376**

375'. Elytral apices rounded (c). Elytra without a broad transverse pale fascia antemedially (*Eupogonius*).....**377**



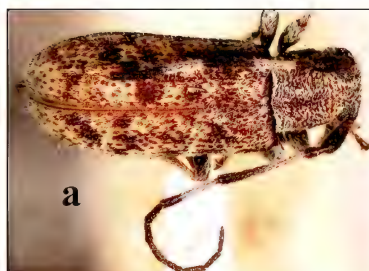
376(375). Three to five tufts of long black hairs along middle costal ridge of elytron (a).....
.....*Pogonocherus penicillatus* LeConte

376'. Elytra lacking tufts of long black hairs (b)*Pogonocherus mixtus* Haldeman



377(375'). Antennae with third and fourth antennomeres very long and broadly annulate at basal half with pale gray pubescence. Remainder of antennae dark, apical antennomeres much shorter than third and fourth (a)..... *Eupogonius annulicornis* Fisher

377'. Antennae mostly uniformly colored, without annulations.....**378**



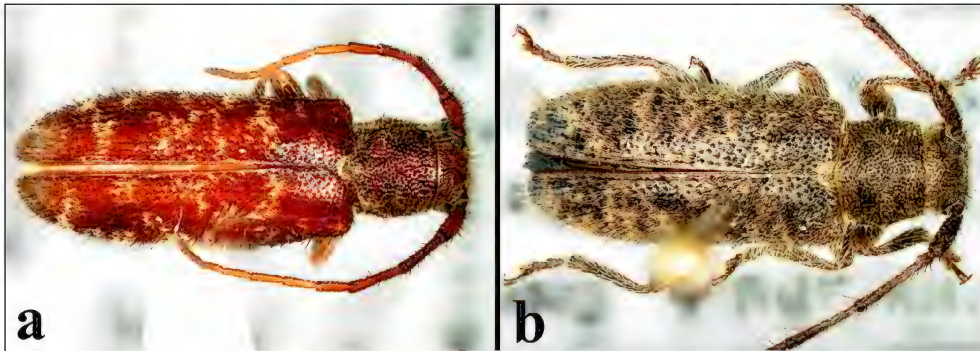
378(377'). Integument mostly black to very dark reddish brown. Pronotum with a longitudinal fascia of red or orange pubescence on each side (a).....*Eupogonius subarmatus* (LeConte)

378'. Integument reddish to gray or light brown. Pronotum without red or orange pubescent fasciae379



379(378'). Integument reddish with reticulating strips of white pubescence on elytra. Pronotum mostly glabrous at middle (a) *Eupogonius tomentosus* (Haldeman)

379'. Integument gray, reddish brown, or brown with irregular patches of tawny pubescence on elytra. Pronotum mostly pubescent at middle (b)..... *Eupogonius pauper* LeConte



380(373'). Elytra with dozens of small, round, randomly scattered spots of orange pubescence. Much of integument with gray pubescence, often forming broad, antemedial transverse band on elytra (a)..... *Oncideres cingulata* (Say)

380'. Elytra without pubescence as above381



Key

- 381(380').** Dorsally, integument uniformly light gray or light brown, without mottling or fasciae.
Acute spine at posterior fourth of pronotum which is directed posterolaterally (a) (*Dectes*)**382**
- 381'.** Dorsally, integument almost always mottled or patterned with several colors of pubescence
(if uniformly pubescent, then very dark brown to black). Spine on pronotum variable.....**383**



- 382(381).** Outer apex of femora gray. Tarsi basally pale. Lower eye lobe usually shorter than genal area below it (a) [possible synonym of *D. texanus*]***Dectes sayi* Dillon & Dillon**
- 382'.** Outer apex of femora dark reddish-brown to black. Tarsi unicolorous. Lower eye lobe usually subequal to genal area below it (b)***Dectes texanus* LeConte**

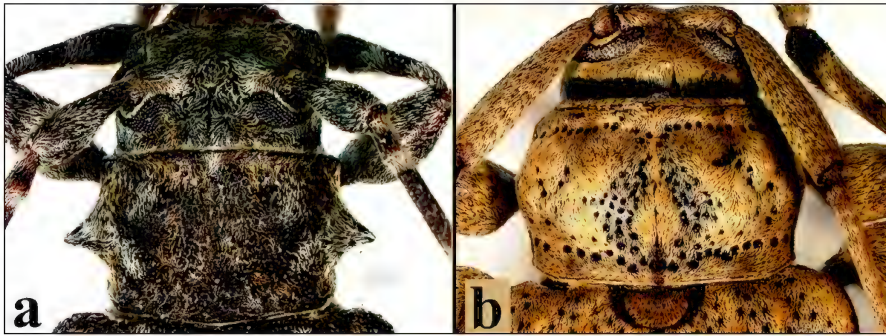


- 383(381').** Pronotum with at least 3 acute lateral tubercles on each side and with three shiny longitudinal crests on disk. Elytron with a prominent middle carina (arcuate at basal one-fourth, straight to apex for remainder). Large (over 1.5 cm) and boldly black or dark reddish-brown and white (a) (possibly introduced into Florida)***Steirastoma breve* (Sulzer)**
- 383'.** Pronotum usually with only 1 lateral tubercle or projection. Pronotal disk without longitudinal crests. Elytron without prominent middle carina. Size variable**384**



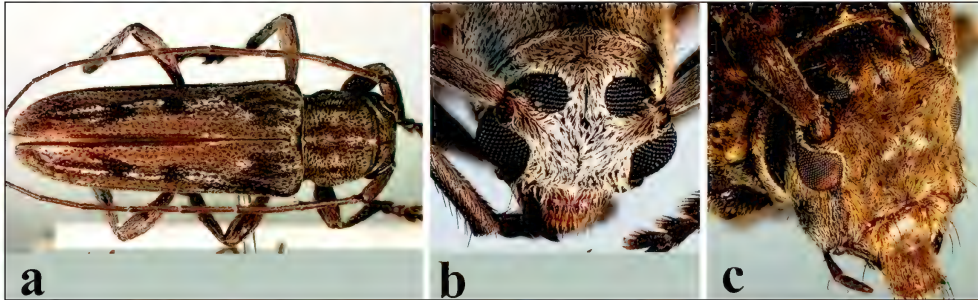
384(383'). Scape short (not reaching halfway point of pronotum), usually distinctly clavate (a) ...**385**

384'. Scape long (reaching at least to halfway point of pronotum), slender, only slightly enlarged apically (b) (Acanthocinini)**389**



385(384). Scape not clavate, short, reaching just past anterior margin of pronotum. Lower eye lobe occupying nearly all of gena, extending to near genal margin (b). Elytra with two to three short, longitudinal white pubescent fasciae, mostly in a row (a).....***Lypsimena fuscata* Haldeman**

385'. Scape distinctly clavate and short. Lower eye lobe small and elongate, far removed from genal margin. Elytra without pubescent fasciae in above arrangement (c) (Acanthoderini)**386**



386(385'). Elytra with a well defined, undulating, antemedial, transverse white macula (a).....
.....***Aegomorphus quadrigibbus* (Say)**

386'. Elytra without a well defined white macula**387**

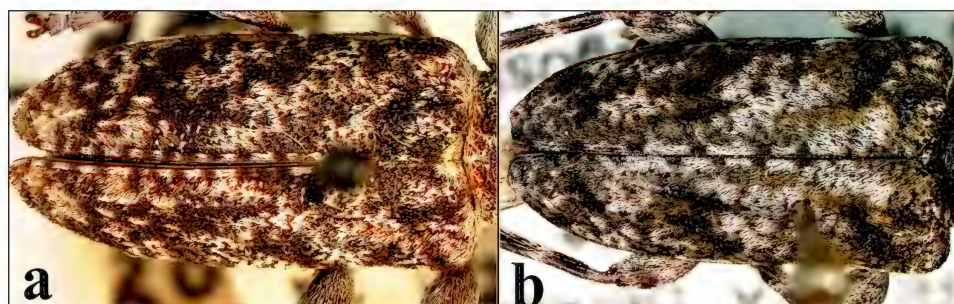


Key

- 387(386’)**. Base of elytra with scattered granulae and few punctures. A distinct “N” or “M” shaped black macula post-medially, otherwise pubescence mostly uniformly gray (a).....
Aegomorphus morrisii (Uhler)
- 387’**. Base of elytra without granulae and with many punctures. Black maculae, if present, not very distinct. Pubescence somewhat light and dark mottled over elytron.....**388**



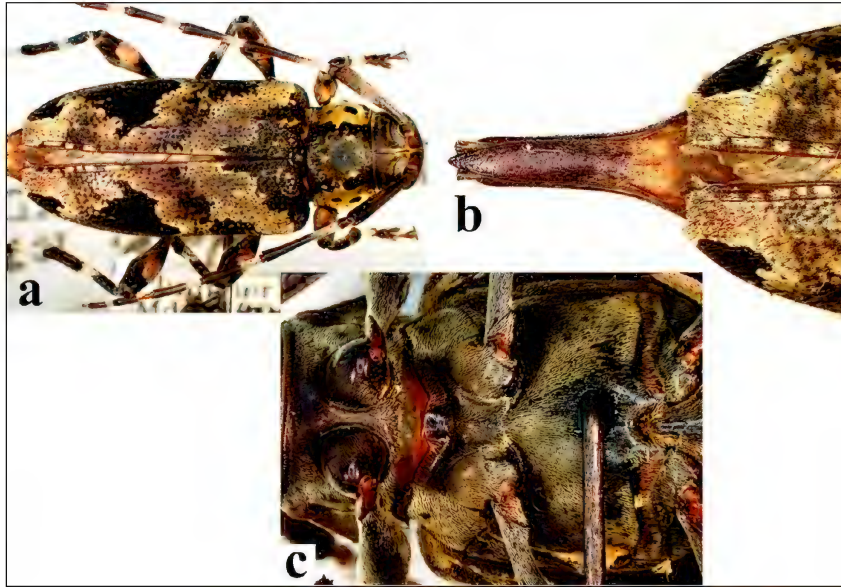
- 388(387’)**. Elytral apices rounded. At most, a very ill-defined dark macula postmedially (a).....
Oplosia nubila (LeConte)
- 388’**. Elytral apices transversely to obliquely truncate. Vague “M” shaped black macula post-medially (b).....*Aegomorphus modestus* (Gyllenhal)



- 389(384’)**. Large, dark macula at middle of side of each elytron, bordered posteriorly by white pubescence. Large, deep punctures at basal third to half of elytron. Pronotal disk margined with nearly complete circle of darker pubescence. Females without modified, extended ovipositor. Over 1.5 cm long (a, b).....*Lagocheirus araneiformis stroheckeri* Dillon
- 389’**. Without the above characters in combination.....**390**

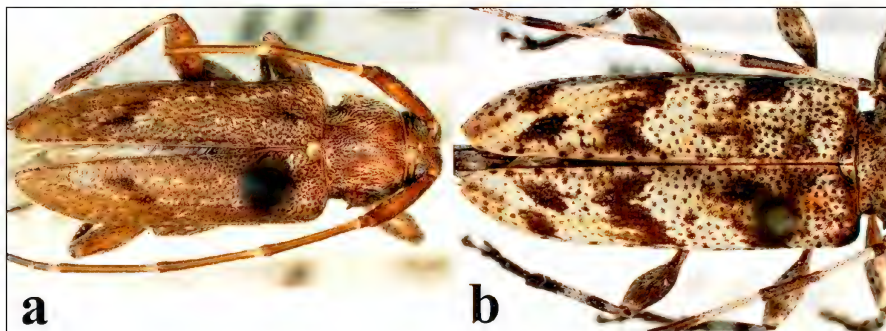


- 390(389')**. If less than 1 cm, then go to 397. If more than 1 cm, then with following characters in combination: Elytra with dark patch postmedially (a). Mesocoxal process about half as wide as mesocoxa or less (c). Lateral pronotal tubercles acute. Females with very long protruding ovipositor (modified final tergite/sternite) (b)**391**
- 390'**. Either less than 1 cm, or, if larger, then without all above characters in combination, although many taxa will have several of the above states**397**



- 391(390)**. Elytra with a large dark macula postmedially at side, a small dark macula at outer apex, a large dark periscutellar region (including scutellum), and a moderate sized dark macula antemedially at side. Middle region of pronotum dark with sides and remainder of elytra covered in light brown pubescence (see 390a-c above) *Urographis triangulifer* (Haldeman)
- 391'**. Elytra and pronotum without dark maculae as described above**392**

- 392(391')**. Antennae with white pubescent annulae restricted to extreme base of each joint. Uniformly reddish brown except for subtle, angled black macula postmedially and subtle white highlights along portions of costae of elytra (a). Males with terminal tergite and sternite weakly notched.....*Eutrichillus biguttatus* (LeConte)
- 392'**. Antennae with distinct pale annulations occupying basal one-third or more of most antennomeres. Elytra with more distinct black maculae and mottling of light and dark pubescence throughout (b). Males with terminal tergite and sternites strongly notched**393**

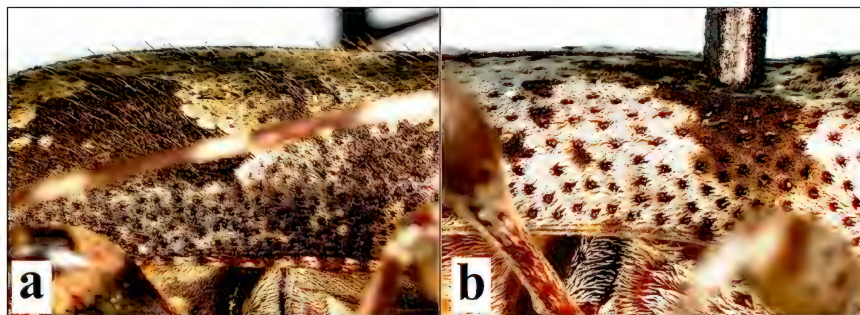


Key

- 393(392')**. Elytral epipleural margin and sides of pronotum with bold, black pubescence. Apical half of elytron with notched, triangular, black macula as in (a). Length over 2 cm.....*Acanthocinus nodosus* (Fabricius)
- 393'**. Elytral maculations not as in (a). Most specimens less than 2 cm**394**



- 394(393')**. Elytra with coating of suberect hairs (a) (*Urographis*).....**395**
- 394'**. Elytra without coating of suberect hairs (b) (*Acanthocinus*).....**396**

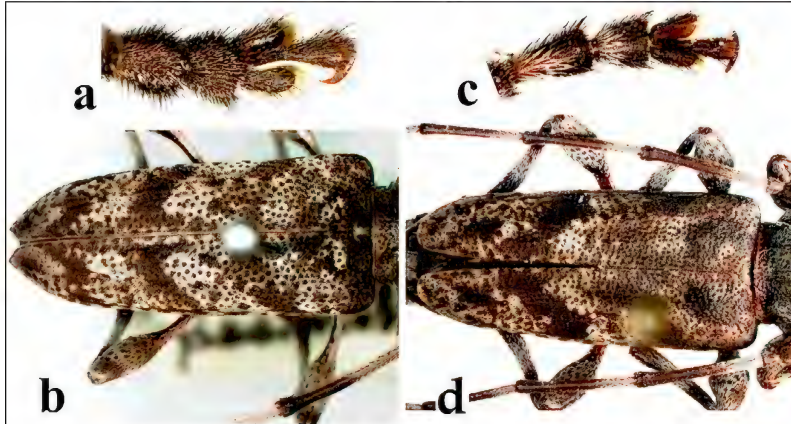


- 395(394)**. Anterior two-thirds of elytra with several large patches or coalesced spots of black. Small region along suture, at anterior one-third, of pale pubescence usually present. Black or reddish brown with pale mottling (a).....*Urographis fasciatus* (DeGeer)
- 395'**. Anterior two-thirds of elytra without large patches or coalesced spots of black. Small region along suture, at anterior one-third, darker than surrounding sutural area. Gray or light reddish brown appearance with less mottling at anterior two-thirds of elytra as in previous species (b)...
.....*Urographis despectus* (LeConte)



396(394'). Tarsi uniformly dark (a). Males with dense fringe of short white pubescence on inner-ventral margin of basal antennomeres (b) *Acanthocinus obsoletus* (Olivier)

396'. Tarsi in part with white pubescence (particularly, most of first tarsomere) (c). Males with inconspicuous fringe of pubescence on antennae (d) *Acanthocinus pusillus* Kirby



397(390'). Upper eye lobes very close together, separated less than the width of the upper eye lobe (see 353a). Pronotum with yellow-brown pubescent bands or elongated spots, remainder darker. Elytra with postmedial and antemedial dark maculae bordered by lighter maculae (a)...
..... *Nyssodrysina haldemani* (LeConte)

397'. Upper eye lobes more widely separated, by more than width of the upper eye lobe (see 353b).
Pronotal and elytral pubescence not as above **398**



398(397'). Prothorax with 7-8 longitudinal narrow fasciae of tan setae (three rows visible on each side, 1-2 at middle of disk.) Elytra and antennae with scattered erect, thick black setae. Elytral apex strongly pointed on outer edge (see 354a) *Alcidion umbraticus* (Jacquelin du Val)

398'. Prothorax with pubescence in different pattern. Elytra and antennae without such setae.
Elytral apex variable, usually without strongly produced outer point **399**



399(398'). Pronotal spines acute, posteriorly positioned at sides, usually with abrupt constriction of pronotum posterior to spine (a) (see also 325c) **400**

399'. Pronotal tubercles rounded or without abrupt constriction at posterior base of tubercle, usually closer to middle of sides (see 355a-d) **355**

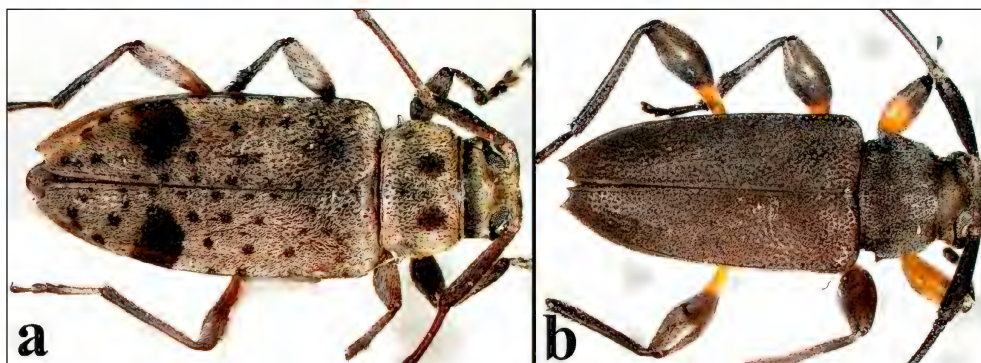
Key

400(399). Antennae with bold, white pubescent annulae restricted to extreme base of each joint. Uniformly reddish brown except for subtle, angled black macula postmedially and subtle white highlights along portions of costae of elytra. Females with long, protruding ovipositor formed by terminal tergite and sternite (see 392a).....*Eutrichillus biguttatus* (LeConte)

400'. Antennae annulate in different way or non-annulate. Elytra differently colored and/or maculate. Females without elongated ovipositor**401**

401(400'). Elytral and pronotal pubescence mostly uniform light gray with at least 10 round dark spots. Lateral pronotal spines long (a)**402**

401'. Elytra and pronotal pubescence not as above. Lateral pronotal spines variable (if some round dark spots present, then background is not uniformly gray and lateral pronotal spines are short) (b)**404**



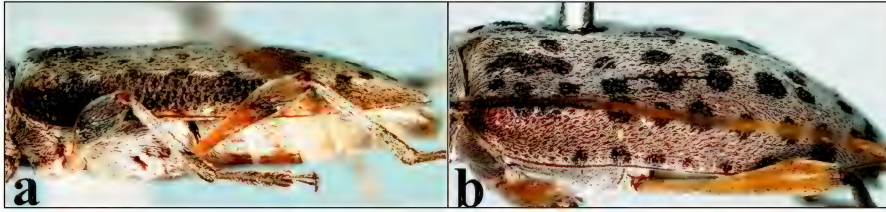
402(401). Pronotum with 2-4 dark round spots on anterior half, without spots on posterior half. Each elytron with at least a dozen dark spots on a uniformly gray background. Antennae at least partially dark (see 401a above).....**403**

402'. Pronotum with 4 dark round spots (2 anteriorly and 2 posteriorly). Each elytron with only about 6 dark spots on a uniformly gray background. Antennae uniformly pale reddish (a)
.....*Lepturges regularis* (LeConte)



403(402). Epipleuron of elytron dark (a).....*Hyperplatys maculata* Haldeman

403'. Epipleuron of elytron without dark markings (b)..... *Hyperplatys aspersa* (Say)

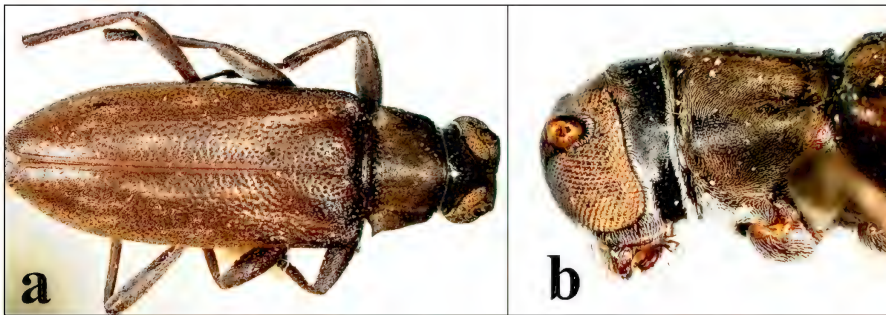


404(401'). Head, pronotum, elytra, and antennae uniformly dark without maculae. Femora bicolored, pale reddish yellow at base, dark at apex (see 401b above).....
..... *Hyperplatys femoralis* Haldeman

404'. Head, pronotum, and elytra usually not uniformly dark, usually with maculae (if uniformly dark then femora not bicolored)405

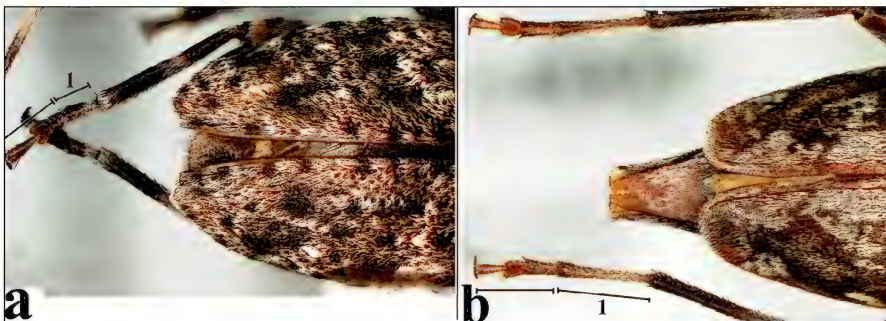
405(404'). Head, pronotum, and elytra dark. Vague pale fasciae in form of elongated spots barely evident on elytra. Lower eye lobe occupying nearly all of head from lateral view (a, b) (known only from Florida)..... *Lepturges megalops* Hamilton

405'. Elytra with pale and dark maculae (not uniformly dark). Lower eye lobe not occupying nearly all of head from lateral view406



406(405'). Part or all of elytral suture with alternating light and dark maculations. First metatarsomere shorter than remaining metatarsomeres combined (a) (*Liopinus* & *Sternidius*).....407

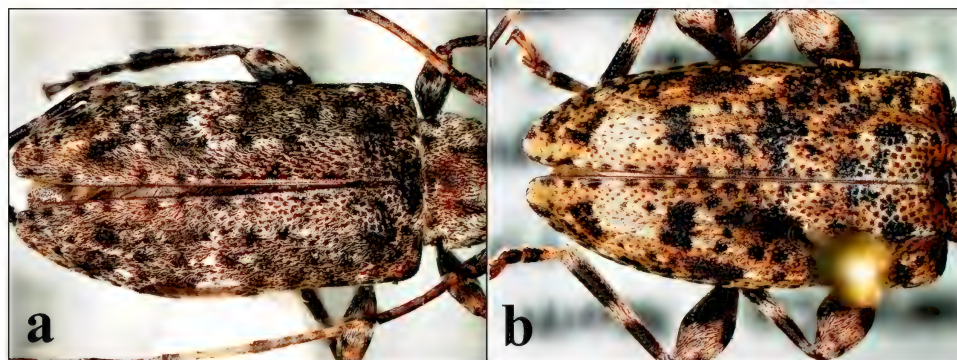
406'. Suture uniformly colored without alternating light and dark maculations. First metatarsomere about as long or longer than remaining metatarsomeres combined. (b) (*Lepturges* & *Urgleptes*)411



Key

407(406). Elytra with mottled light and dark pattern with a diffuse transverse white postmedial macula that is not bordered by a black line or macula (a) *Liopinus punctatus* (Haldeman)

407'. Elytra with mottled light and dark pubescence. If a white or pale gray postmedial macula is present, it is bordered by a dark macula or line (b) **408**



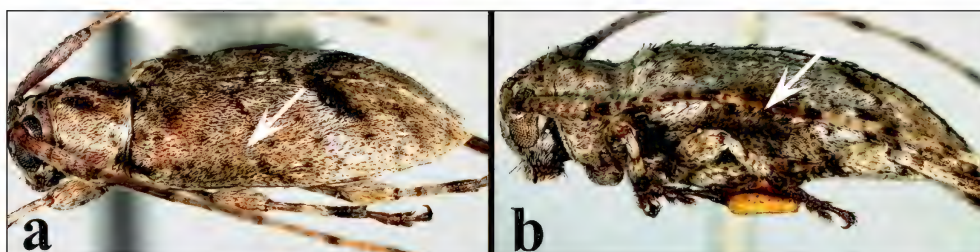
408(407'). Elytra with an oblique, narrow, postmedial black macula. Most specimens less than 8 mm long (a)..... **409**

408'. Elytra with a transverse, thick, postmedial black macula on anterior border of a white or pale gray macula. Most specimens longer than 8 mm (see 407b above).....
..... *Sternidius variegatus* (Haldeman)

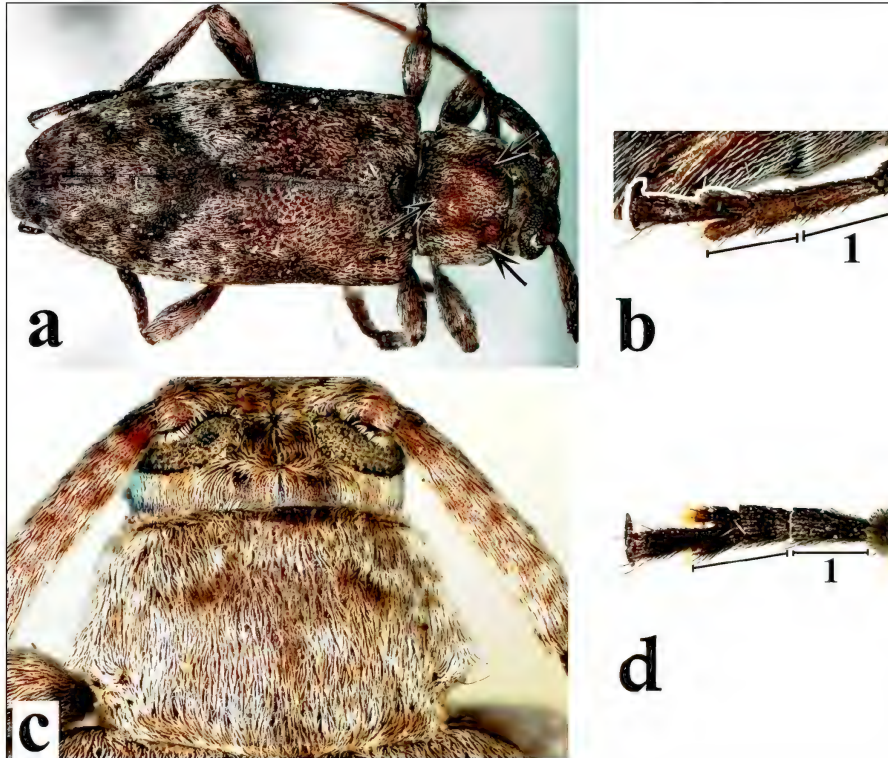


409(408). Epipleuron of elytron not darkened (a). Underside and appendages uniformly pubescent, without mottling..... *Liopinus misellus* (LeConte)

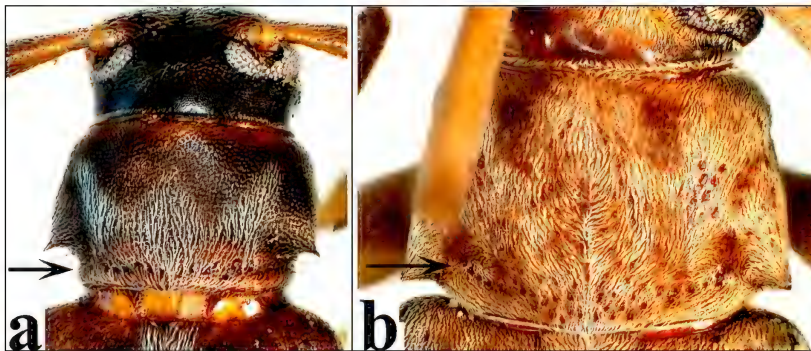
409'. Epipleuron of elytron darkened or with bold dark macula (b). Underside and appendages mottled in part..... **410**



- 410(409')**. Pronotum typically with 3 vague dark spots (two anteriorly, one postmedially) (a). Hind tarsi of most specimens with first segment equal or longer than following two segments (b)*Liopinus alpha* (Say)
- 410'**. Pronotum typically without 3 dark spots (occasionally a vague dark area at middle of disk and/or two anteriorly) (c). Hind tarsi with first segment shorter than following two segments (d).....*Liopinus mimeticus* (Casey)



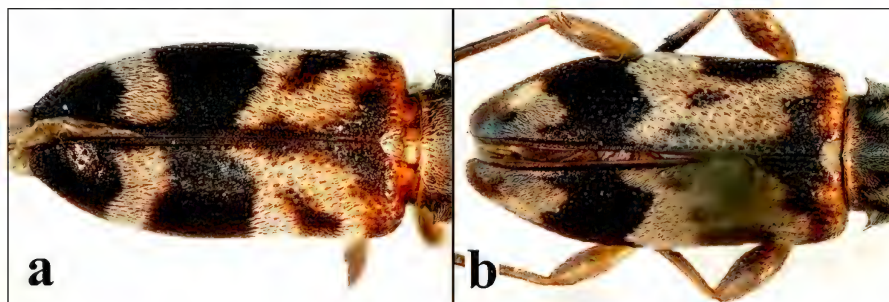
- 411(406')**. Pronotum with distinct row of large punctures posteriorly that continues behind (posterior to) lateral spine. No other large punctures present on pronotal disk (a) (*Urgleptes*)**412**
- 411'**. Pronotum with row of large punctures posteriorly that terminate before reaching lateral spine and meet scattered large punctures on inside of spine base. Large punctures also present around base of lateral spine and elsewhere on pronotal disk (b) (*Lepturges*)**415**



Key

412(411). Elytra with apices behind transverse pale macula completely dark. Apical pale macula bordered anteriorly by a broader transverse dark macula that reaches suture. Base of elytra around scutellum completely dark, not interrupted by paler fasciae (a).....
.....*Urgleptes facetus* (Say)

412'. Elytra with apices not completely dark. Base of elytra around scutellum with some interruption by paler areas (b)**413**

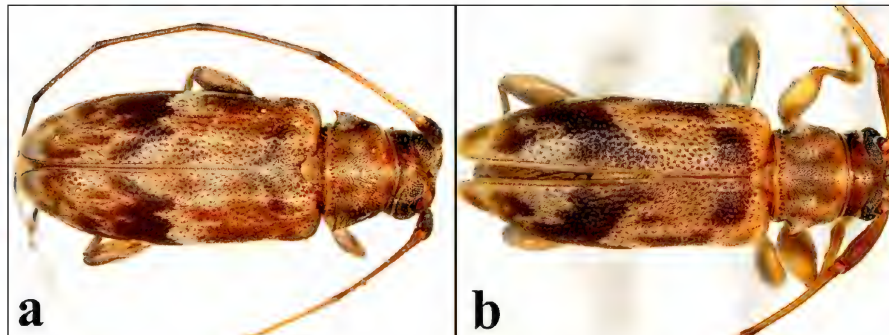


413(412'). Elytra with very broad (about one-fourth length of elytron) postmedial dark macula that reaches suture (see *412b* above)*Urgleptes querci* (Fitch)

413'. Elytra with usually narrow postmedial dark macula that narrows near and does not meet suture (see *414a-b* below).....**414**

414(413'). Anterior border of postmedial dark macula with 2-3 abrupt indentations of pale fasciae (a).....*Urgleptes foveatocollis* (Hamilton)

414'. Anterior border of postmedial dark macula oblique, with, at most, subtle indentations (b)..
.....*Urgleptes signatus* (LeConte)

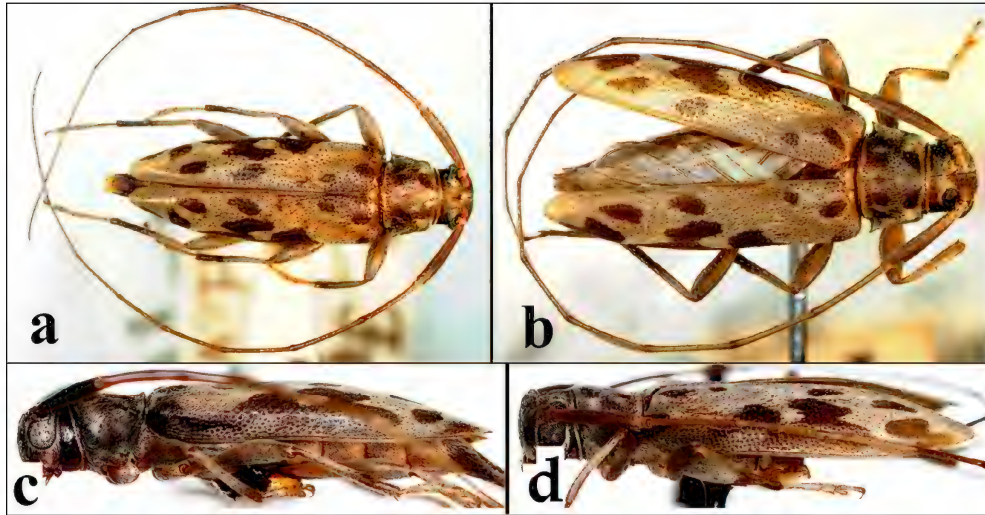


415(411'). Dark maculae of elytra distinct and unclouded with gray or tawny pubescence (see *416a-b* below).....**416**

415'. Dark maculae of elytra with less distinct edges and clouded with gray or tawny pubescence (see *417a-b* below)**417**

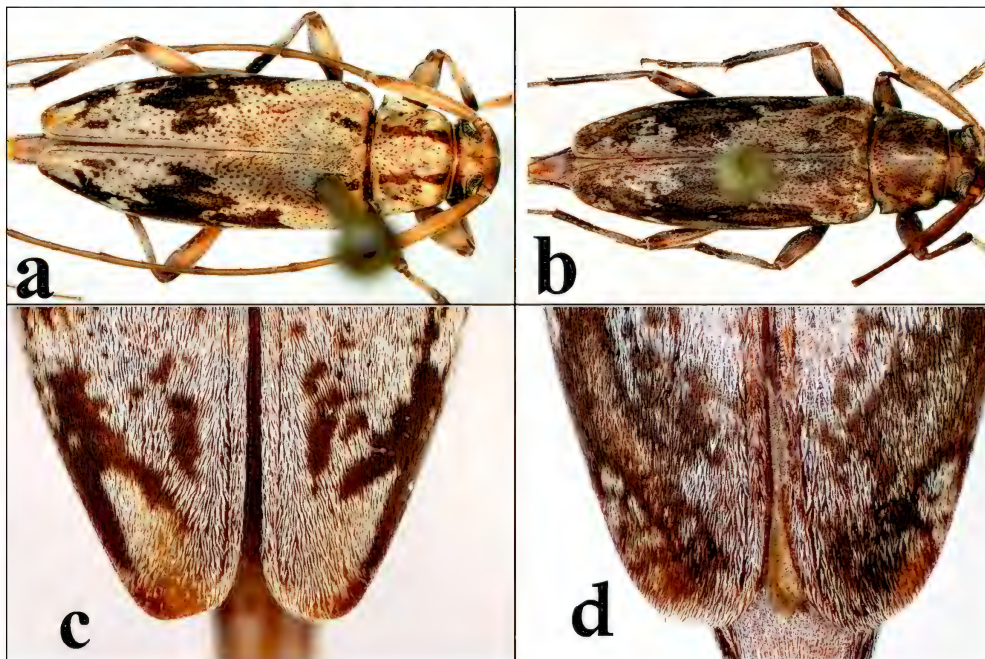
416(415). Elytra with dark markings over most of lateral margin (a, c).....
.....*Lepturges symmetricus* (Haldeman)

416'.. Elytra with dark markings incomplete and divided over lateral margin (b, d).....
.....*Lepturges pictus* (LeConte)



417(415'). Elytral pubescence usually very light gray colored (a). Elytral apices obliquely truncate, outer angle protruding more than sutural angle (c). Legs pale reddish-brown to pale gray *Lepturges angulatus* (LeConte)

417'. Elytral pubescence usually dirty gray colored (b). Elytral apices slightly rounded to truncate (d). Legs light to dark reddish or grayish brown *Lepturges confluens* (Haldeman)



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## Species Accounts and Notes

All the species treated in the key are listed below in alphabetical order within each subfamily. The current tribal placement and a brief overview of distribution, seasonality, and host plants are listed for each species. The sizes listed are based on the photographed specimens (or average if more than one specimen was photographed). Appendix 1 is a list of scientific and common names of host plants alphabetically arranged by scientific name. Plant names are presented in their currently accepted scientific combination with standardized botanical author abbreviations. These names are based on the USDA Natural Resources Conservation Service website (USDA NRCS 2007). Host plant information is not exhaustive and primary literature should be examined for more details. Biological information is summarized mostly from Yanega (1996) and Chemsak & Linsley (1997), but also Thomas, et al. (2006); Linsley (1962a, 1962b, 1963, 1964); Linsley & Chemsak (1972, 1976, 1984, 1995); Bond & Philips (1999); Browne, et al. (1993); Brown & Peck (1996); Giesbert (1993); Korotyaev, et al. (2005); Lingafelter & Chemsak (2002); Lingafelter & Nearn (2006); Lingafelter & Hoebeke (2002); Lingafelter & Horner (1993); Lingafelter & Ivie (2005); Hanley (2005); Hoffman (2003); MacRae (1993); MacRae & Rice (2007); Monné (2001a–c; 2002a–b; 2005a–b; 2006); Monné & Hovore (2005); Morris (2002); Rice & Veal (2006); Hoffman, et al. (2002); Vogt (1949) and Schiefer (1998, 2000, 2001). To this list are important unpublished observations from Roy Morris and Eugenio Nearn, along with my own observations from fieldwork and examination of label data from the Smithsonian Institution collections. Plates of nearly every species follow, arranged based on their similarity by key characters. Using these plates as the primary identification tool is not encouraged as errors can result since key characters may not be visible. The plates are provided as a final confirmation reference to be consulted *after* the beetle is keyed.

### DISTENIINAE

***Distenia undata* (Fabricius)** (Disteniini, Plate 1a, 24 mm). Known throughout the eastern and central U. S., adults are active from June–September. Larvae feed in various hardwoods including *Cercis canadensis* and also *Pinus*.

### PARANDRINAE

***Hesperandra polita* (Say)** (Parandrini, Plate 1c, 15 mm). Until recently, this species was placed in the genus *Parandra*. Present throughout eastern U. S., adults are active from June–August. Larvae feed in decaying heartwood of *Carya*, *Liriodendron*, and *Fagus*.

***Neandra brunnea* (Fabricius)** (Parandrini, Plate 1d, 14 mm). Until recently, this species was placed in the genus *Parandra*. Known throughout eastern North America, adults are active from March–November. Larvae feed in moist, decaying heartwood of most eastern trees.

### PRIONINAE

***Archodontes melanopus* (Linnaeus)** (Macrotomini, Plate 2j, 45 mm). Known throughout the southeastern U. S. north into Virginia and west to Texas, adults are active from June–September. Larvae develop and form galls in roots of *Quercus virginiana* and *Q. nigra*, primarily, and other hardwoods.

***Derobrachus brevicollis* Audinet–Serville** (Prionini, Plate 2a, female on left, male on right, 36 mm). Known from the southeastern U. S. to Texas, adults are active from June–August. Larvae develop in the soil on roots of *Paspalum notatum* and *Quercus*.

***Elateropsis rugosus* Gahan** (Solenopterini, Plate 1f, two variants shown, 24 mm). Known from southern Florida, Bahamas, and possibly Cuba, adults have been collected from June–August. Larvae are known to develop in *Metopium toxiferum*, *Bursera simaruba*, and *Coccoloba diversifolia*.



- Elateropsis scabrosus* Gahan** (Solenopterini, Plate 1g, 23 mm). Occurring in southern Florida, Bahamas, and Cuba, adults have been collected from May–August. Larvae are known to develop in *Bursera simaruba*.
- Mallodon dasystomus* (Say)** (Macrotomini, Plate 2k, 40 mm). Known primarily from the southern U. S. and into Mexico, but with records from Illinois and Virginia, adults are active from May–October. Larvae feed in many hardwoods including *Acer negundo*, *A. pseudoplatanus*, *Alnus*, *Bursera simaruba*, *Quercus*, *Liquidambar styraciflua*, *Carya*, *Platanus occidentalis*, *P. wrightii*, *Salix*, *Sideroxylon lanuginosa*, *Celtis laevigata*, and *Ulmus crassifolia*.
- Orthosoma brunneum* (Forster)** (Prionini, Plate 2b, 32 mm). Adults of this widespread eastern U. S. species are active from May–November. Larvae feed in hardwoods and conifers including *Juglans*, *Carya*, *Castanea*, *Quercus*, *Tilia*, *Acer*, *Abies*, *Pinus*, and *Tsuga*.
- Prionus debilis* Casey** (Prionini, Plate 2e, 22 mm). Adults of this central U. S. species are active from May–November. Larvae may feed in living roots of primarily *Quercus* and *Castanea*, but also *Vitis*, *Pyrus*, and *Zea mays*.
- Prionus fissicornis* Haldeman** (Prionini, Plate 2c, 25 mm). Adults of this central U. S. species are active from May–July. Larvae are root feeders on grasses (also reported from roots of *Zea mays*).
- Prionus imbricornis* (Linnaeus)** (Prionini, Plate 2f, 25 mm). Adults of this widespread eastern and central U. S. species are active from April–November. Larvae feed on living roots, primarily *Quercus*, *Castanea*, *Carya illinoensis*, *Vitis*, *Pyrus*, and *Zea mays*.
- Prionus laticollis* (Drury)** (Prionini, Plate 2g, 26 mm). Adults of this widespread eastern and central North American species are active from June–September. Larvae feed on living roots of various trees and shrubs, including *Quercus*, *Populus*, *Tilia*, *Castanea*, *Malus*, and *Carya illinoensis*, among others.
- Prionus palparis* Say** (Prionini, Plate 2d, 29 mm). Adults of this central and west–central U. S. species are active from April–August. Larval hosts are unknown.
- Prionus pocularis* Dalman** (Prionini, Plate 2h, 26 mm). Adults of this widespread eastern U. S. species are active from May–August. Larvae feed in dead *Pinus*.
- Sphenostethus taslei* (Buquet)** (Solenopterini, Plate 1e, two variants shown, 21 mm). Known from central and eastern U. S., but much more common in Florida, adults are active from June–August. Larvae feed in *Quercus*, *Castanea*, *Fagus*, and *Cercis*.
- Stenodontes chevrolati* Gahan** (Macrotomini, Plate 2i, 55 mm). Known from southern Florida, Bahamas, and Cuba, adults have been collected in many months of the year, especially from May–September. Larvae develop in many tropical hardwoods including *Spondias purpurea* and *Bursera simaruba*.
- Strongylaspis corticarius* (Erichson)** (Macrotomini, Plate 1i, 30 mm). Known from Mexico, Central America, and northern South America, with one unconfirmed record in Florida, adults have been collected from May–August. Hosts are not reported for this species although other Neotropical species are known from *Scalesia*.
- Tragosoma depsarius* (Linnaeus)** (Prionini, Plate 1h, male on left and female on right, 24 mm). Adults of this widespread U. S. species are active from June–September. Larvae feed in sapwood of decaying *Pinus*.

## SPONDYLIDINAE

- Scaphinus muticus* (Fabricius)** (Spondylidini, Plate 1b, 14 mm). Adults of this uncommon southeastern and east-central U. S. species are active from June–July. Larvae develop in *Pinus*.

## ASEMINAE

- Arhopalus foveicollis* (Haldeman)** (Asemini, Plate 3d, 20 mm). Adults of this widespread eastern and central North American species are active from June–August. Larvae feed in dead *Pinus* and *Picea*.

- Arhopalus rusticus* (Linnaeus)** (Asemini, Plate 3e, 19 mm). Adults of this southeastern U. S. and Bahamian species are active from March–August. Larvae develop in *Pinus*.
- Asemum australe* LeConte** (Asemini, no figure). Adults of this rare eastern U. S. species are active from June–July. The only known larval host is *Pinus strobus*.
- Asemum striatum* (Linnaeus)** (Asemini, Plate 3c, 13 mm). Adults of this widespread North American species are active from April–July. Larvae feed in recently dead conifers, especially *Pinus*, but also *Picea*, *Larix*, *Abies*, and *Pseudotsuga menziesii*.
- Atimia confusa* (Say)** (Atimiini, Plate 18e, 9 mm). Adults of this widespread central and eastern U. S. species are active in spring and fall. Larvae feed under bark of *Juniperus*, *Cupressus*, *Taxodium distichum*, *Thuja*, and *Chamaecyparis*.
- Tetropium cinnamopterum* Kirby** (Asemini, Plate 3a, 12 mm). Adults of this southeast Canada and northeast U. S. species are active from May–July. Larvae develop beneath bark of *Larix*, *Abies*, *Pinus*, and *Picea*.
- Tetropium schwarbianum* Casey** (Asemini, Plate 3b, 12 mm). Adults of this southeast Canada and northeast U. S. species are active from June–July. Larvae feed in *Picea* and *Pinus strobus*.

### LEPTURINAE

- Acmaeops discoideus* (Haldeman)** (Lepturini, Plate 7b, 8 mm). Adults of this eastern U. S. species are active from May–June. Larvae develop in *Pinus*.
- Acmaeops proteus* (Kirby)** (Lepturini, Plate 5i, two variants shown, 7 mm). Adults of this widespread eastern and northern North American species are active from May–August. Larvae feed on the inner bark of conifers, especially *Abies*, *Picea*, *Tsuga*, and *Pinus*.
- Alosternida chalybaea* (Haldeman)** (Lepturini, Plate 7e, 6 mm). Adults of this eastern U. S. species are active from May–July, occasionally attracted to flowers of *Cornus*. Larval hosts are unknown.
- Analeptura lineola* (Say)** (Lepturini, Plate 7j, 10 mm). Adults of this common eastern U. S. species are active from May–August. Larvae feed in various hardwoods, especially *Betula*, *Carpinus caroliniana*, *Ostrya virginiana*, and also *Pinus*. Adults are attracted to many flowers, especially *Aruncus dioicus*, *Hydrangea arborescens*, *Vitis* and *Smilacina racemosa*.
- Anoplodera pubera* (Say)** (Lepturini, Plate 7i, 10 mm). Adults of this widespread eastern U. S. species are active from May–July. Larvae feed in *Ulmus*, *Juglans*, and *Pinus*. Adults are attracted to many wildflowers, especially *Viburnum*, *Spiraea*, *Heracleum*, *Achillea*, *Tragopogon* and *Hydrangea arborescens*.
- Anthophylax attenuatus* (Haldeman)** (Lepturini, Plate 4g, 14 mm). Adults of this southeastern Canada and northeastern U. S. species are active from May–August. Larvae feed in decaying hardwood logs, including *Acer*, *Fagus*, *Ostrya virginiana*, and *Populus*.
- Anthophylax cyaneus* (Haldeman)** (Lepturini, Plate 3f, two variants shown, 13 mm). Adults of this eastern North American species are active from May–July. Larvae feed in various hardwoods including *Acer*, *Betula*, *Amelanchier arborea*, *Castanea*, *Fagus*, and may also feed in conifers. Adults are often collected on *Acer spicatum*.
- Anthophylax hoffmani* Beutenmüller** (Lepturini, no figure). Adults of this localized U. S. species are rarely collected. They are known from high elevations in Virginia, above 3,500 feet from June–July. *Abies fraseri* is a probable larval host, *Picea rubens* may also be a host.
- Anthophylax viridis* LeConte** (Lepturini, Plate 3g, two variants shown, 14 mm). Adults of this eastern U. S. species are active from June–July. Larvae develop in *Betula*, *Fagus*, and *Acer*.
- Bellamira scalaris* (Say)** (Lepturini, Plate 8c, two variants shown, 22 mm). Adults of this eastern U. S. species are active from May–September. Larvae feed in decayed hardwoods including *Populus*, *Carya*, *Salix*, *Acer*, *Liriodendron*, and *Betula*, as well as *Pinus*. Adults have been collected on flowers of *Rhus*, *Spiraea*, *Cirsium*, and *Phytolacca*.
- Brachyleptura champlaini* Casey** (Lepturini, Plate 5g, 10 mm). Adults of this eastern U. S. species are active from June–August. Larvae feed in *Pinus*. Adults are attracted to many wildflowers, especially *Tragopogon*, *Hydrangea arborescens*, and *Achillea*.



- Brachyleptura circumdata* (Olivier) (Lepturini, Plate 5f, 8 mm). Adults of this eastern U. S. species are active from June–July. Larvae feed in *Picea* and possibly *Pinus*.
- Brachyleptura rubrica* (Say) (Lepturini, Plate 5e, 13 mm). Adults of this eastern North American species are active from May–August. Larvae feed in decayed hardwoods including *Carya*, *Fagus*, *Quercus*, *Prunus*, and *Platanus*. Adults are attracted to many flowers, especially *Tragopogon*, *Sambucus nigra canadensis*, *Hydrangea arborescens*, and *Achillea*.
- Brachyleptura vagans* (Olivier) (Lepturini, Plate 5h, two variants shown, 10 mm). Adults of this eastern North American species are active from April–August. Larvae feed in decaying conifers and hardwoods including *Betula*, *Carya*, *Juglans nigra*, *Pinus*, and *Tsuga*. Adults are attracted to many flowers, especially *Rhus glabra* and *Daucus carota*.
- Brachysomida bivittata* (Say) (Lepturini, Plate 4d, two variants shown, 9 mm). Adults of this eastern North American species are active from April–July. Larvae develop in *Quercus*, *Carya*, and *Cornus*. Adults are attracted to many wildflowers, in particular *Geranium maculatum*.
- Centrodera decolorata* (Harris) (Lepturini, Plate 3j, 21 mm). Adults of this eastern North American species are active from May–July. Larvae develop in many trees such as *Acer*, *Castanea*, *Fagus*, and *Quercus*, among others.
- Centrodera quadrimaculata* (Champlain & Knull) (Lepturini, no figure). Adults of this rare north-eastern U. S. species are active from May–June. Larval feeding habits are unknown.
- Centrodera sublineata* LeConte (Lepturini, Plate 4f, 12 mm). Adults of this central and eastern U. S. species are active from March–May. No larval hosts are known.
- Charisalia americana* (Haldeman) (Lepturini, Plate 8h, 8 mm). Adults of this uncommon eastern U. S. species are active from April–July. Larvae feed in decayed *Liriodendron* and *Nyssa*. Adults are attracted to wildflowers, notably *Heracleum*.
- Desmocerus palliatus* (Forster) (Desmocerini, Plate 6b, 22 mm). Adults of this widespread, but generally uncommon eastern and central U. S. species are active from April–August. Larvae feed in the living roots of *Sambucus nigra canadensis*, and adults are often found on the blossoms.
- Encyclops caerulea* (Say) (Lepturini, Plate 3h, 8 mm). Adults of this eastern North American species are active from May–July. Larvae feed in living hardwoods, especially *Quercus* and *Acer*, and rarely *Pinus*.
- Evodinus monticola* (Randall) (Lepturini, Plate 4h, two variants shown, 8 mm). Adults of this eastern and northern North American species are active from May–July. Larvae develop in various conifers.
- Gaurotes cyanipennis* (Say) (Lepturini, Plate 3i, 10 mm). Adults of this eastern North American species are active from May–August. Larvae develop in numerous hardwoods and shrubs. Adults are attracted to *Hydrangea arborescens*, among other wildflowers.
- Gaurotes thoracica* (Haldeman) (Lepturini, Plate 4c, 8 mm). Adults of this typically uncommon (but occasionally, locally abundant) eastern U. S. species are active from April–July. Larval feeding habits are unknown.
- Grammoptera haematites* (Newman) (Lepturini, Plate 8d, 5 mm). Adults of this eastern North American species are active from April–July. Larvae feed in various shrubs. Adults are attracted to flowers of genera *Viburnum*, *Cornus*, *Tragopogon* and *Hydrangea arborescens*, among others.
- Grammoptera subargentata* (Kirby) (Lepturini, Plate 8e, 7 mm). Adults of this boreal North American species are active from April–August. Larvae feed in various hardwoods, including *Rhus*, *Populus*, and *Quercus*. Adults are attracted to many wildflowers, especially *Heracleum*, *Tragopogon* and *Hydrangea arborescens*.
- Idiopidonia pedalis* (LeConte) (Lepturini, Plate 7h, 8 mm). Adults of this uncommon eastern North American species are active from June–July. Larval feeding habits are unknown. Adults have been collected on flowers of *Rhododendron*, *Viburnum*, *Spiraea*, and *Pyrus*.
- Judolia cordifera* (Olivier) (Lepturini, Plate 9h, 10 mm). Adults of this eastern U. S. species are active from May–August. Larvae feed in *Castanea*. Adults are attracted to many wildflowers, especially *Tragopogon* and *Hydrangea arborescens*, *Daucus carota*, *Achillea*, and also *Sambucus nigra* and *Cornus*.

- Judolia montivigans* (Couper) (Lepturini, Plate 6k, two variants shown, 9 mm). Adults of this boreal North American species are active from June–August. Larvae feed in conifers as well as *Salix* and *Populus*.
- Leptorhabdium pictum* (Haldeman) (Lepturini, Plate 5c, 13 mm). Adults of this eastern U. S. species are active from May–June. Larvae feed in various hardwoods including *Betula*, *Quercus*, and *Carya*.
- Leptura abdominalis* (Haldeman) (Lepturini, Plate 7k, 12 mm). Adults of this eastern U. S. species are active from May–July. Larvae feed in *Taxodium distichum* and *Juniperus*.
- Leptura oblitterata deleta* (LeConte) (Lepturini, Plate 8b, 14 mm). Adults of this rare northeastern U. S. subspecies are active from July–August. Larval hosts are unknown. Adults have been taken on flowers of *Spiraea* and *Solidago*.
- Leptura subhamata* Randall (Lepturini, Plate 8a, two variants shown, 13 mm). Adults of this southeastern Canada and northeastern U. S. species are active from June–August. Larvae feed in decaying *Tsuga* and *Pinus*. Adults are attracted to many wildflowers, especially *Spiraea*, *Achillea*, *Ceanothus*, *Heracleum*, *Tragopogon*, and *Hydrangea arborescens*.
- Lepturopsis biforis* (Newman) (Lepturini, Plate 7f, 14 mm). Adults of this eastern North American species are active from June–August. Larvae feed in many decaying hardwoods and conifers.
- Lycochoriolaus lateralis* (Olivier) (Lepturini, Plate 8i, two variants shown, 11 mm). Adults of this uncommon southeastern U. S. species are active from March–June. Larval feeding habits are unknown.
- Metacmaeops vittata* (Swederus) (Lepturini, Plate 6a, 8 mm). Adults of this very common eastern North American species are active from May–July. Larvae feed in *Liriodendron* and *Castanea*. Adults have been collected on many flowers, in particular those of *Vitis*.
- Necydalis mellita* (Say) (Necydalini, Plate 10g, 13 mm). Adults of this central and eastern U. S. species are active from May–August. Larvae develop in the heartwood of *Quercus* and *Castanea*, primarily, but also rarely in *Pinus*.
- Neostalosterna capitata* (Newman) (Lepturini, Plate 6d, 8 mm). Adults of this eastern U. S. species are active from May–July. Larvae develop in *Betula*. Adults have been collected on flowers of *Cornus*, *Aruncus*, *Viburnum*, *Pyrus*, and *Hydrangea*.
- Pidonia aurata* (Horn) (Lepturini, Plate 6i, 10 mm). Adults of this eastern U. S. species are active from May–July. Larval feeding habits are unknown. Adults are attracted to many wildflowers, especially *Viburnum*, *Spiraea*, *Tragopogon* and *Hydrangea arborescens* and flowering trees such as *Rhododendron* and *Cornus*.
- Pidonia densicollis* (Casey) (Lepturini, Plate 6j, 9 mm). Adults of this eastern U. S. species are active from May–June. Larval feeding habits are unknown. Adults are attracted to flowers of *Rhododendron*, *Hydrangea*, *Cornus*, *Geranium*, *Aruncus*, and *Rubus*.
- Pidonia ruficollis* (Say) (Lepturini, Plate 7c, 9 mm). Adults of this eastern U. S. species are active from May–July. Larvae feed in numerous hardwoods. Adults are attracted to flowers of many genera including *Viburnum*, *Spiraea*, *Geranium*, *Tragopogon*, *Hydrangea arborescens* and flowering trees and shrubs such as *Rhododendron*, *Ceanothus*, and *Cornus*.
- Pseudogaurotina abdominalis* (Bland) (Lepturini, Plate 6c, 8 mm). Adults of this northeastern U. S. species are active from May–July. Larval feeding habits are unknown.
- Pseudostrangalia cruentata* (Haldeman) (Lepturini, Plate 9a, 7 mm). Adults of this uncommon central and eastern U. S. species are active from May–June. Larval feeding habits are unknown. Adults are attracted to flowers of *Cornus*, *Aesculus*, *Rosa*, *Heracleum*, and *Tragopogon*.
- Rhagium inquisitor* (Linnaeus) (Lepturini, Plate 4e, 12 mm). Adults of this widespread North American species are active from February–July. Larvae bore in various conifers including *Abies*, *Larix*, *Picea*, *Pinus*, *Pseudotsuga*, and *Tsuga*.
- Stenelytrana emarginata* (Fabricius) (Lepturini, Plate 8j, 31 mm). This widespread eastern and central U. S. species was, until recently, known under the genus *Leptura*. Adults are active from April–August. Larvae develop in decaying hardwoods including *Fagus*, *Ulmus*, *Liriodendron*, *Nyssa*, *Castanea*, and *Acer*. Adults have been collected on *Rosa* flowers and sapflows.
- Stenocorus cinnamopteris* (Randall) (Lepturini, Plate 4b, 12 mm). Adults of this central and eastern U. S. species are active from April–July. Larvae feed in *Hydrangea* and *Prunus serotina*.



- Stenocorus cylindricollis* (Say) (Lepturini, Plate 3k, 15 mm). Adults of this eastern U. S. species are active from May–August. Larvae feed in *Carya* and *Rhus*.
- Stenocorus schaumii* (LeConte) (Lepturini, Plate 4a, 23 mm). Adults of this central and eastern U. S. species are active from May–August. Larvae feed in various hardwoods including *Fraxinus*, *Acer*, *Fagus*, *Juglans nigra*, and *Amelanchier*.
- Stenocorus trivittatus* (Say) (Lepturini, Plate 5b, 15 mm). Adults of this uncommon North American species are active from June–July. Larval feeding habits are unknown.
- Stenocorus vittiger* (Randall) (Lepturini, Plate 5a, 14 mm). Adults of this southern Canada and eastern U. S. species are active from May–July. Larvae develop in various shrubs.
- Stictoleptura canadensis* (Olivier) (Lepturini, Plate 5d, 14 mm). Adults of this southern Canada and eastern U. S. species are active from May–August. Larvae feed in various conifers and occasionally hardwoods. Adults are attracted to flowers of many genera including *Melilotus*, *Cirsium*, *Spiraea*, *Achillea*, *Solidago*, *Eupatorium*, *Rosa*, *Rhus*, and *Daucus*.
- Strangalepta abbreviata* (Germar) (Lepturini, Plate 7d, 13 mm). Adults of this widespread eastern North American species are active from May–August. Larvae feed in various decaying conifers and hardwoods including *Abies*, *Pinus*, *Picea*, *Juniperus*, *Tsuga*, *Larix*, *Populus*, *Acer*, *Betula*, and *Castanea*. Adults are attracted to many wildflowers, especially *Heracleum*, *Tragopogon*, *Daucus carota*, *Vitis*, and *Hydrangea arborescens*.
- Strangalia acuminata* (Olivier) (Lepturini, Plate 10a, 12 mm). Adults of this common eastern North American species are active from June–July. Larvae develop in various shrubs and hardwoods including *Alnus* and *Ostrya virginiana*. Adults are attracted to many wildflowers, especially of genera *Rhus*, *Viburnum*, *Prunus*, *Tragopogon*, *Sambucus nigra canadensis*, and *Hydrangea arborescens*.
- Strangalia bicolor* (Swederus) (Lepturini, Plate 8g, 12 mm). Adults of this eastern U. S. species are active from May–July. Larvae feed in *Acer* and *Quercus*. Adults are attracted to *Hydrangea arborescens*, among other wildflowers.
- Strangalia famelica famelica* Newman (Lepturini, Plate 9f, 13 mm). Adults of this widespread eastern U. S. species are active from May–July. Larvae develop in *Castanea*, *Quercus*, and *Betula*.
- Strangalia famelica solitaria* Haldeman (Lepturini, Plate 9g, 12 mm). Adults of this southeastern U. S. species are active from May–September. Larvae develop in *Quercus* and *Betula*.
- Strangalia luteicornis* (Fabricius) (Lepturini, Plate 9e, 12 mm). Adults of this common central and eastern U. S. species are active from May–August. Larvae feed in various hardwoods and shrubs including *Ulmus*, *Quercus*, and *Vitis*. Adults are attracted to many wildflowers, especially *Tragopogon*, *Daucus carota*, and *Hydrangea arborescens*, and occasionally on *Asclepias syriaca*.
- Strangalia sexnotata* Haldeman (Lepturini, Plate 10b, 12 mm). Adults of this common central and eastern U. S. species are active from May–August. Larval feeding habits are unknown.
- Strangalia strigosa* Newman (Lepturini, Plate 9d, 13 mm). Adults of this Florida species are active from March–June. Larval hosts are unknown for this species. Adults have been collected on many flowers including *Rhamnus*, *Castanea*, *Persea*, *Erigeron*, *Rubus*, *Ilex*, *Vaccinium*, *Oxypolis*, and *Asparagus*.
- Strophiona nitens* (Forster) (Lepturini, Plate 6e, 11 mm). Adults of this widespread eastern and central U. S. species are active from May–July. Larvae feed in living or dead hardwoods, including *Castanea*, *Quercus*, *Carya*, *Juglans*, *Fagus*, and *Acer*. Adults are attracted to *Hydrangea*, *Spiraea*, *Tragopogon*, and other flowers.
- Trachysida mutabilis* (Newman) (Lepturini, Plate 7g, two variants shown, 12 mm). Adults of this eastern North American species are active from April–July. Larvae feed in decaying hardwoods. Adults are attracted to flowers of *Cornus*, *Viburnum*, *Crataegus*, *Achillea*, *Spiraea*, *Aruncus*, *Ceanothus*, and *Prunus*, among many others.
- Trigonarthris atrata* (LeConte) (Lepturini, Plate 6g, 15 mm). Adults of this uncommon central and eastern U. S. species are active from May–June. Larvae may feed in *Ulmus*. Adults have been collected on flowers of *Cornus* and *Castanea*.
- Trigonarthris minnesotana* (Casey) (Lepturini, Plate 6f, 14 mm). Adults of this eastern U. S. species are active from May–August. Larvae feed in various hardwoods and *Pinus*. Adults have

been collected on many flowers including *Cirsium*, *Hydrangea*, *Achillea*, *Viburnum*, *Spiraea*, *Cornus*, and others.

- Trigonarthris proxima* (Say)** (Lepturini, Plate 6h, 14 mm). Adults of this eastern North American species are active from May–August. Larvae feed in various decaying hardwoods, including *Acer* and *Carya*. Adults are attracted to wildflowers, especially *Viburnum*, *Sambucus nigra canadensis*, *Achillea*, *Cornus*, *Tragopogon*, and *Hydrangea arborescens*.
- Typocerus acuticauda* Casey** (Lepturini, Plate 10d, 12 mm). Adults of this common eastern North American species are active from May–September. Larval feeding habits are unknown. Adults have been taken on *Spiraea*, among other flowers.
- Typocerus badius* (Newman)** (Lepturini, Plate 9l, 13 mm). This species is known only from Georgia and Florida. Larval hosts are unknown. Adults are active from April–June and can be collected on flowers of *Ilex*, *Vaccinium arboreum*, and *Cornus asperifolia*. Larval hosts include *Quercus*.
- Typocerus deceptus* Knoll** (Lepturini, Plate 10c, 12 mm). Adults of this eastern U. S. species are active from June–July. Larval feeding habits are unknown. Adults are attracted to *Hydrangea arborescens* and *Rhus glabra*.
- Typocerus fulvocinctus* Knoll** (Lepturini, Plate 9c, 9 mm). Known only from Florida, adults are active from April to June and have been collected on flowers of *Ilex glabra*. Larval hosts are unknown.
- Typocerus lugubris* (Say)** (Lepturini, Plate 8f, 10 mm). Adults of this eastern U. S. species are active from May–August. Larvae feed in *Pinus*. Adults are attracted to many wildflowers, especially *Tragopogon*, *Rhus glabra*, and *Hydrangea arborescens*.
- Typocerus lunulatus* (Swederus)** (Lepturini, Plate 9b, 9 mm). Adults of this east-central and south-east U. S. species are active from May–August. Larvae develop in *Pinus*.
- Typocerus octonotatus* (Haldeman)** (Lepturini, Plate 9j, 11 mm). Adults of this common central and eastern U. S. species are active from May–August. Larvae are borers in native grasses including *Andropogon*, *Sporobolus*, *Sorghastrum*, and *Agropyron*. Adults are on many flowers including *Rudbeckia*, *Aster*, *Cirsium*, *Rhus*, *Helianthus*, *Solidago*, and *Coreopsis*.
- Typocerus sinuatus* (Newman)** (Lepturini, Plate 9i, 12 mm). Adults of this southern U. S. species are active from March–August and can be collected on flowers of *Asclepias*, *Ceanothus americanus*, *Oenothera*, *Marshallia*, and *Opuntia*. Larval feeding habits are unknown.
- Typocerus velutinus* (Olivier)** (Lepturini, Plate 10e, 12 mm). Adults of this eastern North American species are active from May–September. Larvae feed in various decaying hardwoods including *Betula*, *Populus*, *Quercus*, and *Carya*. Adults are attracted to many wildflowers, especially *Spiraea*, *Viburnum*, *Sambucus nigra*, *Asclepias*, *Achillea*, *Daucus carota*, and *Hydrangea arborescens*.
- Typocerus zebra* (Olivier)** (Lepturini, Plate 9k, 12 mm). Adults of this east central and southern U. S. species are active from March–August. Larvae feed in *Pinus*. Adults have been taken on many flowers including *Cornus*, *Rudbeckia*, *Viburnum*, *Cirsium*, *Rhus*, *Hydrangea*, *Solidago*, and *Achillea*.
- Xestoleptura octonotata* (Say)** (Lepturini, Plate 7a, 12 mm). Adults of this eastern North American species are active from May–July. Larvae feed in *Quercus*. Adults are attracted to many wildflowers and flowering trees, especially *Cornus*, *Ceanothus*, *Viburnum*, *Tragopogon*, and *Hydrangea arborescens*.

## CERAMBYCINAE

- Achryson surinamum* (Linnaeus)** (Achrysonini, Plate 21k, 18 mm). Adults are active from April–September. Larvae feed in numerous woody plants, mostly legumes, including *Acacia*, *Prosopis*, *Robinia*, but also *Ulmus* and *Celtis*.
- Aethecerinus hornii* (Lacordaire)** (Trachyderini, Plate 17l, 14 mm). Adults of this uncommon southeastern U. S. species are active from March–July. Larvae are known from *Quercus inopina*, *Carya floridana*, and *Persea bourboni* in Florida.
- Agallissus lepturoides* (Chevrolat)** (Agallissini, Plate 18b, 14 mm). This species ranges from Central America into Texas and may occur into coastal Arkansas and Louisiana. Adults are active from April–June. No larval hosts have been reported in the literature.



- Ancylocera bicolor* (Olivier)** (Trachyderini, Plate 17k, 12 mm). Adults of this southern U. S. species are active from April–July. Larvae feed in *Carya*, *Quercus*, and *Acacia farnesiana*.
- Aneflomorpha delongi* (Champlain & Knull)** (Elaphidiini, Plate 12k, 13 mm). Adults of this rare Florida and Georgia endemic are active from April–September. Larvae are known to develop in *Quercus laevis*.
- Aneflomorpha subpubescens* (LeConte)** (Elaphidiini, Plate 12l, 14 mm). Adults of this widespread eastern U. S. species are active from May–August. Larvae feed in live saplings of *Quercus* and *Castanea*.
- Anelaphus cinereus* (Olivier)** (Elaphidiini, Plate 13f, 9 mm). Adults of this widespread Caribbean and southeastern U. S. species are active from May–December. Larval hosts include *Conocarpus erecta*, *Guaiacum officinale*, *Casuarina equisetifolia*, and *Zanthoxylum*.
- Anelaphus inermis* (Newman)** (Elaphidiini, Plate 13i, 15 mm). Adults of this southern U. S., Bahamian, and Central American species are known from April–August. Larval hosts include *Citrus*, *Quercus virginiana*, *Carya*, *Sideroxylon tenax*, *Avicennia germinans*, and *Piscidia piscipula*.
- Anelaphus moestus* (LeConte)** (Elaphidiini, Plate 12i, 11 mm). Adults of this widespread central and eastern U. S. species are active from June–August. Larval hosts include *Juglans*, *Quercus* (including *Q. laurifolia*), *Celtis*, and *Rhus*.
- Anelaphus mutatum* (Gahan)** (Elaphidiini, Plate 13g, 17 mm). This species, formerly in the genus *Parelaphidion*, is known from Florida and the northern Caribbean. Adults are active in July–December. Larval hosts are unknown.
- Anelaphus parallelus* (Newman)** (Elaphidiini, Plate 13m, 12 mm). Adults of this widespread eastern North American species are active from May–August. Larvae are live twig pruners of most eastern hardwoods and shrubs, especially *Quercus*, but also *Crataegus viridis*, *Celtis tenuifolia*, and *Betula nigra*.
- Anelaphus pumilus* (Newman)** (Elaphidiini, Plate 13h, 11 mm). Adults of this eastern and central U. S. species are active from March–July. Larvae feed in *Quercus* (including *Q. phellos*), *Carya*, *Castanea*, *Ulmus*, *Betula nigra*, and *Tilia*.
- Anelaphus villosus* (Fabricius)** (Elaphidiini, Plate 13l, 13 mm). Adults of this widespread eastern North American species are active from April–September. Larvae are live twig pruners of most eastern hardwoods and shrubs, especially *Carya* and *Tilia*.
- Batyle ignicollis australis* Linsley** (Trachyderini, Plate 19m, 10 mm). Adults of this southeastern U. S. subspecies are active from April–June. Larval hosts include *Pinus* and *Quercus inopina* Ashe.
- Batyle ignicollis ignicollis* (Say)** (Trachyderini, Plate 19l, 11 mm). Adults of this common central and southern U. S. species are active from April–August. Larvae are stem borers in herbaceous plants and shrubs including *Rhus*. Adults can be collected on many wildflowers.
- Batyle suturalis* (Say)** (Trachyderini, Plate 21j, 9 mm). Adults of this widespread common central and southern U. S. species are active from April–September. Larvae develop in small dead branches of *Quercus*, *Carya*, *Celtis occidentalis*, *C. tenuifolia*, *C. laevigata*, *Castanea*, *Crataegus viridis*, and *Sapindus saponaria*. Adults are attracted to many wildflowers.
- Callidiellum rufipenne* (Motschulsky)** (Callidiini, Plate 21l, two variants shown, 9 mm). In 1997, a population of this Japanese species was discovered in North Carolina. In 1998, infestations were discovered on live *Thuja occidentalis* in southwestern Connecticut. Native hosts in Japan include *Chamaecyparis*, *Cryptomeria japonica*, and *Cupressus*. Adults are active in spring and early summer.
- Callidium antennatum* Newman** (Callidiini, Plate 20h, 11 mm). Adults of this widespread northern and eastern U. S. species are active from April–July. Larvae feed under bark of recently dead or dying *Pinus* and rarely *Picea*.
- Callidium frigidum* Casey** (Callidiini, Plate 20e, 8 mm). Adults of this uncommon eastern North American species are active from April–June. Larvae feed under bark of *Juniperus* and *Chamaecyparis*.
- Callidium schotti* Schaeffer** (Callidiini, Plate 20g, 10 mm). Adults of this northeastern U. S. and southern Canada species are active from March–July. Larvae feed under *Pinus* bark and possibly also in *Chamaecyparis*.

- Callidium texanum* Schaeffer** (Callidiini, Plate 20f, 10 mm). Adults of this widespread U. S. species are active from May–July. Larvae feed under bark in *Juniperus virginiana* and *J. ashei*.
- Callidium violaceum* (Linnaeus)** (Callidiini, Plate 20i, 11 mm). This species, introduced from Europe, is widespread in southeast Canada and northeast United States. Adults are active from May–August. Larvae feed in dead conifers including *Pinus*, *Larix*, and *Picea*.
- Callimoxys sanguinicollis* (Olivier)** (Stenopterini, Plate 10f, two variants shown, 9 mm). Adults are active from April–July. Larvae feed in *Carya*, but also reportedly mine in *Ceanothus* and related plants.
- Calloides nobilis* (Harris)** (Clytini, Plate 21i, 20 mm). Adults of this rare eastern U. S. species are active from May–October. Larvae develop in dead or dying hardwoods including *Quercus* (including *Q. velutina*), *Fraxinus*, and *Castanea*.
- Chlorida festiva* (Linnaeus)** (Bothriospilini, Plate 16h, 21 mm). This species is widespread throughout the Neotropics and southern U. S. and is broadly polyphagous. Larval hosts include *Mangifera indica*, *Schinopsis balansae*, *Delonix regia*, *Hymenaea courbaril*, *Casuarina equisetifolia*, *Gossypium*, *Acacia*, *Citrus*, and *Solanum*, among others.
- Chlorophorus annularis* (Fabricius)** (Clytini, Plate 21e, 14 mm). There have been over 20 interceptions of this Asian species at ports and nurseries around North America in the last 10 years. There are no confirmed established populations in the U. S., however. Although *Bambusa* is the primary host, many others include *Sinobambusa gibbosa*, *Spondias*, *Tectona*, *Citrus*, *Pyrus*, *Acer*, and *Gossypium*.
- Clytoleptus albofasciatus* (Castelnau & Gory)** (Clytini, Plate 21h, 7 mm). Adults of this uncommon eastern U. S. species are active from May–August. Larvae mine in dead or dying *Vitis* and rarely *Carya*.
- Clytus marginicollis* Castelnau & Gory** (Clytini, Plate 14g, 7 mm). Adults of this eastern North American species are active from April–July. Larvae feed under bark of recently dead *Pinus* branches.
- Clytus ruricola* (Olivier)** (Clytini, Plate 14f, 8 mm). Adults of this eastern U. S. species are active from May–August. Larvae develop in *Acer*, primarily, but also *Betula*, *Carya*, *Fagus*, *Quercus*, *Tilia*, and others.
- Curius dentatus* Newman** (Curiini, Plate 17f, 7 mm). Adults of this uncommon eastern U. S. species are active from May–July. Larvae feed beneath the bark of small branches of both conifers and hardwoods, including *Carya floridana*.
- Curtomerus fasciatus* (Fisher)** (Elaphidiini, Plate 21b, 10 mm). Adults of this Florida and Cuban species have been collected in June. Larval hosts are unknown.
- Curtomerus flavus* (Fabricius)** (Elaphidiini, Plate 19g, 10 mm). Adults of this common and widespread southern U. S., Caribbean, and Pacific Island species are known from all months of the year. Larval hosts include *Acacia farnesiana*, *Nicotiana*, *Casuarina equisetifolia*, *Coccolobis*, and other genera.
- Cyrtophorus verrucosus* (Olivier)** (Anaglyptini, Plate 11d, two variants shown, 9 mm). Adults of this very common and widespread eastern U. S. species are active from March–July, and this species is often among the first encountered each year. Larvae feed in genera that include *Acer*, *Betula*, *Carya*, *Castanea*, *Cercis*, *Cornus*, *Fagus*, *Quercus*, *Ulmus*, and *Pinus*.
- Dryobius sexnotatus* Linsley** (Dryobiini, Plate 11i, 18 mm). Adults of this rare eastern and central U. S. species are active from March–September. Larvae feed in *Acer*, *Ulmus*, *Fagus*, and *Tilia* (*Acer saccharum* is the primary host).
- Eburia cinereopilosa* Fisher** (Eburini, Plate 16a, 21 mm). Adults of this Cuban and Florida species are active from April–June. Larval hosts are unknown.
- Eburia distincta* Haldeman** (Eburini, Plate 16c, 18 mm). Adults of this southeastern U. S. and Bahamian species are active in May–August. This species has been reared from *Baccharis halimifolia*.
- Eburia haldemani* LeConte** (Eburini, Plate 16f, 22 mm). Adults of this common central U. S. species are active from May–July. Larvae feed in hardwoods, including *Celtis*, *Ulmus*, and possibly *Salix*, and also *Juniperus ashei*.



- Eburia quadrigeminata* (Say)** (Eburini, Plate 16e, 21 mm). Adults of this common eastern U. S. species are active from April–September. Larvae develop in numerous hardwoods.
- Eburia stigma* (Olivier)** (Eburini, Plate 16b, 21 mm). Adults of this southern U. S. and Caribbean species are active in May–August. Larvae are known from *Pinus caribaea*, *Lysiloma*, *Sideroxylon* (including *S. foetidissimum*) and *Avicennia germinans*.
- Eburia stroheckeri* Knull** (Eburini, Plate 16d, 24 mm). Adults of this southern Florida endemic have been collected in early June. Host plants are unknown.
- Elaphidion cryptum* Linsley** (Elaphidiini, Plate 12e, 15 mm). Adults of this uncommon south Florida species have been collected on cut branches of *Cojoba arborea* and reared from *Metopium* and *Rhizophora mangle*.
- Elaphidion irroratum* (Linnaeus)** (Elaphidiini, Plate 12f, 16 mm). Adults of this widespread Caribbean and southern U. S. species are active from April–December. Larval hosts include *Avicennia germinans*, *Laguncularia racemosa*, *Spondias purpurea*, and *Albizia*.
- Elaphidion knulli* Linsley** (Elaphidiini, no figure). Adults of this rare Florida species have been reared from *Avicennia germinans* from September–June.
- Elaphidion mucronatum* (Say)** (Elaphidiini, Plate 12c, 14 mm). Adults of this widespread and common eastern North American species are active from April–October. Larvae develop in most eastern hardwoods and shrubs, as well as *Taxodium distichum*.
- Elaphidion tectum* LeConte** (Elaphidiini, Plate 12d, 16 mm). Adults of this south Florida species are active from June–August, and have been reared from *Avicennia germinans*. This species treatment includes *Elaphidion clavis* Linsley that will be synonymized with *E. tectum* in a future work.
- Elytroleptus floridanus* (LeConte)** (Trachyderini, Plate 18f, 9 mm). Adults of this uncommon southeastern U. S. species are active from May–June. Larvae are known to develop in *Quercus laevis*, *Q. inopina*, and *Q. phellos*.
- Enaphalodes archboldi* Lingafelter & Chemsak** (Elaphidiini, Plate 13d, 24 mm). Adults of this rare and endemic central Florida species are active mostly in September, but also records from June and August have been reported. Larval hosts are unknown, but probably include *Quercus*.
- Enaphalodes atomarius* (Drury)** (Elaphidiini, Plate 14b, 23 mm). Adults of this widespread central and eastern U. S. species are active from May–October. Larvae feed in various hardwood genera including *Quercus* and *Carya*.
- Enaphalodes cortiphagus* (Craighead)** (Elaphidiini, Plate 14c, 21 mm). Adults of this widespread, but not generally common eastern and central U. S. species are active from July–September. Larvae feed in living *Quercus*.
- Enaphalodes hispicornis* (Linnaeus)** (Elaphidiini, Plate 13e, 31 mm). Adults of this widespread central and eastern U. S. species are active from May–October. Larvae feed in *Quercus*.
- Enaphalodes rufulus* (Haldeman)** (Elaphidiini, Plate 14a, 23 mm). Adults of this widespread eastern and central U. S. species are active from May–October. Larvae feed in living *Quercus* and *Acer*.
- Euderces picipes* (Fabricius)** (Tillomorphini, Plate 11g, two variants shown, 6 mm). Adults are active from April–August. Larvae feed in branches of numerous hardwoods, especially *Cercis canadensis*, *Prunus serotina*, *Quercus muhlenbergii*, *Salix*, and *Carya*.
- Euderces pini* (Olivier)** (Tillomorphini, Plate 11f, 8 mm). Adults are active from March–June. Larvae feed in various species including *Cornus florida*, *Ulmus alata*, *Carya illinoensis*, and *Fagus grandifolia*.
- Euderces reichei reichei* LeConte** (Tillomorphini, Plate 11e, 4 mm). Adults of this widespread eastern U. S. species are active from March–June. Larvae feed in various hardwoods including *Diospyros virginiana*, *D. texana*, *Prosopis glandulosa*, *Crataegus viridis*, *Celtis tenuifolia*, *C. laevigata*, and *Parkinsonia aculeata*. Adults have been collected on *Salix*, *Zanthoxylum*, and *Cornus*.
- Euryscelis suturalis* (Olivier)** (Clytini, Plate 17a, male on left, female on right, 17 mm). This widespread Caribbean species that also occurs in southern Florida is active throughout the year, but in the summer months for U. S. populations. Hosts include *Metopium toxiferum*, *Prosopis juliflora*, and *Sideroxylon foetidissimum*.

- Glycobius speciosus* (Say) (Clytini, Plate 11h, 23 mm). Adults of this rare eastern U. S. species are active from June–August. Larvae develop in living *Acer saccharum*.
- Gracilia minuta* (Fabricius) (Graciliini, Plate 19h, 5 mm). This widespread European species has been reported in the eastern United States, but existing populations are unconfirmed. Adults are active from May–July. Larvae feed in dead branches of numerous shrubs and hardwoods, including *Quercus*, *Carya*, and *Salix*.
- Hesperophanes pubescens* (Haldeman) (Hesperophanini, Plate 19b, 16 mm). Adults of this uncommon eastern and central U. S. species are active from July–August. Larval feeding habits are unknown.
- Heterachthes ebenus* Newman (Ibidionini, Plate 18h, 9 mm). Adults of this uncommon eastern and central U. S. species are active from April–August. Larval hosts include *Pinus*, *Acacia farnesiana*, and *Quercus inopina*.
- Heterachthes quadrimaculatus* Haldeman (Ibidionini, Plate 18g, 10 mm). Adults of this eastern U. S. species are active from June–August. Larval hosts include *Carya* and *Liriodendron*.
- Heterachthes sablensis* Blatchley (Ibidionini, Plate 18i, 9 mm). Adults of this rare endemic Florida species are active in February–March. The only known larval host is *Avicennia germinans*.
- Heterops dimidiatus* (Chevrolat) (Heteropsini, Plate 15g, 11 mm). This species occurs in the West Indies and has been collected rarely in Florida in May. One known host is *Pithecellobium dulce* for Cuban specimens. It has also been collected by beating *Bursera simaruba*.
- Hylotrupes bajulus* (Linnaeus) (Callidiini, Plate 21c, 15 mm). This species, introduced from Europe, is widespread in the eastern United States. Adults are active from June–August. Larvae bore in dry conifer wood including *Pinus*, *Abies*, and *Picea* commonly used in building construction.
- Knulliana cincta cincta* (Drury) (Bothriospilini, Plate 16k, 17 mm). Adults are active from March–September. Larvae feed in dry branches of hardwoods including *Quercus*, *Carya*, and *Salix*.
- Knulliana cincta spinifera* (Fabricius) (Bothriospilini, Plate 16l, 18 mm). Adults of this widespread southeastern U. S., Caribbean, and Mexican species are active from July–August. Larval hosts include *Carya illinoensis* and *Ostrya virginiana*.
- Linsleyonides albomaculatus* (Champlain & Knull) (Elaphidiini, Plate 12g, 8 mm). Adults of this uncommon Caribbean species are occasionally collected in Florida from May–June. Larval hosts are unknown.
- Megacyllene caryae* (Gahan) (Clytini, Plate 12b, 16 mm). Adults are active from March–June. Larvae develop in recently dead *Carya*, and sometimes in other hardwoods including *Cercis canadensis*, *Gleditsia*, *Prosopis juliflora*, *Maclura pomifera*, *Fraxinus americanus*, and others. Adults can be collected on *Solidago* and *Grindelia*, among other flowers.
- Megacyllene decora* (Olivier) (Clytini, Plate 11j, two variants shown, 18 mm). Adults are active from June–October. Larvae feed in stems of *Amorpha fruticosa*.
- Megacyllene robiniae* (Forster) (Clytini, Plate 12a, 16 mm). Adults of this widespread North American species are active from June–November. Larvae mine in *Robinia pseudoacacia* and other locust species. Adults are often collected on *Solidago*.
- Meriellum proteus* (Kirby) (Callidiini, Plate 21m, 14 mm). Adults of this uncommon northern U. S. species are active from June–July. Larvae develop in dead *Picea* and *Pinus*.
- Methia necydalea* (Fabricius) (Methiini, Plate 10h, 4 mm). This species is widespread in the Caribbean and southern U. S. Adults are active from May–September. Larvae have been reared from *Quercus virginiana* and *Q. phellos*.
- Michthisoma heterodoxum* LeConte (Saphanini, Plate 16g, 6 mm). Adults of this uncommon southeastern U. S. species are active from April–July. Larvae feed in *Carya* and *Quercus*.
- Micranoplum unicolor* (Haldeman) (Elaphidiini, Plate 19f, 7 mm). Adults of this widespread but uncommon eastern and central U. S. species are active from May–July. Larval feeding habits are unknown.
- Microclytus gazellula* (Haldeman) (Anaglyptini, Plate 21g, 7 mm). Adults are active from May–June. Larvae feed in living *Quercus* and *Carya glabra*. Note that the similar species, *M. compressicollis* (Castelnau & Gory) is not included in the key since it is restricted to extreme northeast U. S. and Canada. It can be recognized by having the second antennomere less than half length of fourth (in *M. gazellula*, the second antennomere is about as long as fourth).



- Molorchus bimaculatus bimaculatus* Say** (Molorchini, Plate 11a, 6 mm). Adults of this common eastern and central U. S. species are active from March–July. Larvae develop in dead branches of numerous hardwoods including *Acer*, *Carya*, *Quercus muhlenbergii*, *Crataegus viridis*, *Rhus glabra*, *Cercis canadensis*, *Juglans nigra*, and *Celtis tenuifolia*.
- Molorchus bimaculatus corni* Haldeman** (Molorchini, Plate 11b, 6 mm). Adults of this southeastern U. S. subspecies are active from April–August. Larvae develop in *Cornus floridanus* and *Quercus geminata*.
- Molorchus bimaculatus semiustus* (Newman)** (Molorchini, Plate 11c, 6 mm). Adults of this subspecies are active from April–May. Larvae develop in *Crataegus viridis*, *Carya illinoensis*, and *Vitis*. Adults are often collected on flowers of *Cornus*.
- Neoclytus acuminatus* (Fabricius)** (Clytini, Plate 17b, 11 mm). Adults of this widespread eastern North American species are active from March–October. Larvae develop in most eastern hardwoods, especially *Fraxinus* (including *F. quadrangulata*), *Quercus* (including *Q. velutina*, *Q. phellos*, *Q. muhlenbergii*, and *Q. macrocarpa*), *Carya* (including *C. ovata* and *C. illinoensis*), *Diospyros virginiana*, *Celtis* (including *C. tenuifolia*), *Crataegus viridis*, *Salix nigra*, and *Prunus serotina*, among others.
- Neoclytus caprea* (Say)** (Clytini, Plate 14e, 15 mm). Adults are active from March–June. Larvae develop in *Fraxinus*, *Quercus* (including *Q. vaseyana* var. *vaseyana* and *Q. emoryi*), *Acer*, *Diospyros virginiana*, and *Celtis laevigata* var. *reticulata*.
- Neoclytus cordifer* (Klug)** (Clytini, Plate 16j, 12 mm). This species occurs in the Caribbean and southeastern U. S. Adults are active from April through July. Larvae develop in *Avicennia germinans*, *Rhizophora mangle*, *Citrus*, *Mangifera indica*, *Punica granatum*, *Quercus geminata*, *Carya floridana*, and *Ximenia americana*.
- Neoclytus horridus* (LeConte)** (Clytini, Plate 17e, 8 mm). Adults of this uncommon eastern U. S. species are active from April–July. Larvae feed in *Quercus*.
- Neoclytus jouteli jouteli* Davis** (Clytini, Plate 17c, 7 mm). Adults of this uncommon eastern U. S. subspecies are active from May–September. Larvae feed in *Carya*, *Quercus laevis*, *Q. velutina*, *Q. geminata*, and *Q. alba*.
- Neoclytus jouteli simplarius* Blatchley** (Clytini, Plate 17d, 7 mm). Adults of this uncommon southern U. S. subspecies have been collected in March and April. Larval hosts include *Ampelopsis arborea*, *Quercus nigra*, and *Q. laevis*.
- Neoclytus longipes* (Drury)** (Clytini, Plate 16i, 12 mm). This species is evidently quite rare in the U. S., known only from a few specimens in Florida and Georgia, but is more widespread in the Greater Antilles. Adults are active from April through July. Larvae are known to develop in *Pimenta dioica*.
- Neoclytus mucronatus* (Fabricius)** (Clytini, Plate 14d, 14 mm). Adults of this common eastern U. S. species are active from April–October. Larvae develop in *Carya* (including *Carya illinoensis*), *Diospyros virginiana*, *Celtis laevigata* and rarely *Pinus*.
- Neoclytus scutellaris* (Olivier)** (Clytini, Plate 14h, 11 mm). Adults of this common U. S. species are active from May–October. Larvae typically develop in *Quercus* (including *Q. lyrata*, *Q. palustris*, *Q. phellos*, *Q. velutina*, and *Q. stellata*) and *Carya*.
- Obrium maculatum* (Olivier)** (Obriini, Plate 17h, 5 mm). Adults of this common eastern U. S. species are active from April–October. Larvae feed in numerous hardwoods and shrubs, including *Quercus* (e.g., *Q. phellos*), *Carya* (including *C. illinoensis*), *Crataegus viridis*, *Betula nigra*, *Prunus serotina*, *Celtis occidentalis*, and *C. laevigata* var. *reticulata*.
- Obrium rubidum* LeConte** (Obriini, Plate 17j, 8 mm). Adults of this eastern U. S. species are active in May. Larval feeding habits are unknown.
- Obrium rufulum* Gahan** (Obriini, Plate 17i, 5 mm). Adults of this eastern U. S. species are active from May–August. Larvae feed in dead branches of *Fraxinus*, *Tilia* and *Quercus*.
- Oeme rigida* (Say)** (Oemini, Plate 18j, 18 mm). Adults of this eastern U. S. species are active from June–September. Larvae feed primarily in *Juniperus* and *Taxodium distichum*, but rarely also *Pinus*.
- Osmopleura chamaeropsis* (Horn)** (Agallissini, Plate 18a, 19 mm). Adults of this uncommon Florida species are active from March through May. Larvae develop in *Sabal palmetto*.

- Parelaphidion aspersum* (Haldeman)** (Elaphidiini, Plate 13k, 16 mm). Adults of this widespread eastern and central U. S. species are active from June–October. Larvae develop in *Quercus* (including *Q. velutina*), *Carya*, *Betula nigra*, and *Celtis laevigata*.
- Parelaphidion incertum* (Newman)** (Elaphidiini, Plate 13j, 16 mm). Adults of this widespread eastern and central U. S. species are active from April–September. Larvae feed primarily in living *Morus*, but also *Quercus* and *Carya*.
- Penichroa fasciata* (Stephens)** (Hesperophanini, Plate 21a, 5 mm). Adults are active from June–August. This widespread European species potentially has isolated established populations in the United States, but these are unconfirmed. Larvae feed in twigs of *Carya* and other hardwoods.
- Phymatodes aereus* (Newman)** (Callidiini, Plate 19e, 7 mm). Adults of this uncommon eastern U. S. species are active from April–July. Larvae develop in dead *Quercus* and *Castanea*.
- Phymatodes amoenus* (Say)** (Callidiini, Plate 20a, 7 mm). Adults of this locally common eastern U. S. species are active from April–August. Larvae mine in dead *Vitis*.
- Phymatodes lengi* Joutel** (Callidiini, Plate 20b, 5 mm). Adults of this rare eastern U. S. species are active from June–July. Larval feeding habits are unknown.
- Phymatodes testaceus* (Linnaeus)** (Callidiini, Plate 19d, two variants shown, 13 mm). This species, introduced from Europe, is widely established in the north-central, eastern and southeastern U. S. Adults are active from April–July. Larvae feed under bark of *Quercus*, *Castanea*, *Fagus*, *Malus*, *Prunus*, and *Carya*.
- Phymatodes varius* (Fabricius)** (Callidiini, Plate 20j, 8 mm). Adults of this locally common eastern U. S. species are active from April–July. Larvae feed under bark of *Quercus* (including *Q. stellata* and *Q. vaseyana* var. *vaseyana*) and *Carya*.
- Physocnemum andreae* (Haldeman)** (Callidiini, Plate 20d, 18 mm). This species is uncommon and occurs along the Atlantic coast. Adults are active from June–July. Larvae feed under *Cupressus* bark.
- Physocnemum brevilineum* (Say)** (Callidiini, Plate 20c, 16 mm). Adults of this uncommon eastern and central U. S. species are active from April–August. Larvae feed in living *Ulmus*.
- Placosternus difficilis* (Chevrolat)** (Clytini, Plate 14i, 15 mm). Adults of this widespread southern U. S., Caribbean, and Mexican species are active from March–October. Larval hosts include *Prosopis juliflora*, *Acacia*, *Celtis*, and *Platanus*.
- Plectromerus dentipes* (Olivier)** (Curiini, Plate 17g, 6 mm). Adults of this southern U. S. and Caribbean species are active in many months of the year and hosts include *Quercus*, *Carya illinoensis*, *Cercis canadensis*, *Conocarpus erectus*, *Crossopetalum rhacoma*, *Conocarpus erectus*, *Cojoba arborea*, and *Taxodium distichum*.
- Plesioclytus relictus* Giesbert** (Clytini, Plate 19c, 9 mm). Adults of this rare south-central Florida endemic are active from April–August. Larval hosts are unknown.
- Plinthocoelium suaveolens suaveolens* (Linnaeus)** (Callichromatini, Plate 15e, 26 mm). Adults of this southeastern U. S. species are active from May–September. Hosts include *Sideroxylon* and possibly *Carya*.
- Pronocera collaris* (Kirby)** (Callidiini, Plate 19k, 10 mm). Adults of this widespread northern U. S. species are active from June–August. Larvae feed in *Pinus* and *Picea*.
- Psyrassa pertenuis* (Casey)** (Elaphidiini, Plate 13b, 10 mm). Adults of this eastern U. S. species are active from the June–July. Larvae feed in various hardwoods including *Carya* and *Prunus serotina* and also *Magnolia* and *Conocarpus erectus*.
- Psyrassa unicolor* (Randall)** (Elaphidiini, Plate 13a, 11 mm). Adults of this widespread eastern U. S. species are active from May–August. Larvae girdle twigs of numerous hardwoods, especially *Quercus*, *Carya* (including *C. illinoensis*), *Cercis canadensis* and *Fagus*.
- Purpuricenus axillaris* Haldeman** (Trachyderini, Plate 15i, 13 mm). Adults of this widespread eastern U. S. species are active from May–August. Larvae develop in branches of *Quercus*, *Carya*, and *Castanea*.
- Purpuricenus humeralis* (Fabricius)** (Trachyderini, Plate 15h, 15 mm). Adults of this widespread, but generally uncommon eastern species are active from June–August. Larvae mine in dead branches of numerous hardwoods.



- Purpuricenus paraxillaris MacRae** (Trachyderini, Plate 15j, 16 mm). Adults of this eastern U. S. species are active in June–August. Larval hosts include *Castanea dentatus* and *Quercus velutina*.
- Rhopalophora longipes (Say)** (Rhopalophorini, Plate 18d, 9 mm). Adults of this common central and southern U. S. species are active from May–August. Larvae feed in small branches of *Cercis canadensis* and *Cornus*. Adults have been collected on blossoms of *Crataegus*, *Rhus*, and *Cercis*.
- Romulus globosus Knull** (Elaphidiini, Plate 12h, 33 mm). Adults of this rare Florida endemic are active from May–August. Larval hosts are unknown, but probably include *Quercus*.
- Ropalopus sanguinicollis (Horn)** (Callidiini, Plate 19j, 14 mm). Adults of this northeast U. S. species are active from June–July. Larvae feed under bark of living *Prunus serotina*.
- Sarosesthes fulminans (Fabricius)** (Clytini, Plate 21d, 15 mm). Adults of this widespread but generally uncommon eastern U. S. species are active from May–August. Larvae develop primarily in *Castanea*, *Quercus*, and *Juglans*.
- Semanotus ligneus (Fabricius)** (Callidiini, Plate 20k, 10 mm). Adults of this northern U. S. and southern Canada species are active from March–August. Larvae develop in *Chamaecyparis*, *Juniperus*, and *Thuja*.
- Smodicum cucujiforme (Say)** (Smodicini, Plate 18k, 9 mm). Adults of this common eastern and central U. S. species are active from June–September. Larvae feed in various hardwoods including *Carya*, *Acer*, *Quercus*, and *Ulmus rubra*.
- Stenosphenus notatus (Olivier)** (Elaphidiini, Plate 13c, 12 mm). Adults of this central and eastern U. S. species are active from March–September. Larvae feed in dead limbs of *Carya* (including *C. aquatica* and *C. laciniosa*) and *Celtis*.
- Stizocera floridana Linsley** (Elaphidiini, Plate 12j, 10 mm). Adults of this Florida endemic are active in April–May. This species has been reared from *Forestiera segregata* var. *segregata*.
- Stromatium fulvum (Villers)** (Hesperophanini, Plate 19a, 19 mm). There are a few records of this European species having been introduced into eastern U. S., although current established populations cannot be confirmed. Adults there are active from May through September. Larval hosts include *Acacia*, *Carya*, *Fagus*, *Juglans nigra*, *Morus*, *Platanus*, *Prunus*, *Quercus*, *Ulmus*, and others.
- Tessaropa tenuipes (Haldeman)** (Methiini, Plate 10i, two variants shown, 6 mm). Adults of this uncommon central and eastern U. S. species are active from April–May. Larvae develop in small dead branches of various hardwoods including *Quercus*, *Carya*, *Juglans*, and *Betula*. Adults have been collected by beating *Vitis*.
- Tilloclytus geminatus (Haldeman)** (Anaglyptini, Plate 21f, 6 mm). Adults of this widespread eastern U. S. species are active from May–July. Larvae mine dead branches of *Carya*, *Quercus* (including *Q. bicolor*), *Betula nigra*, *Crataegus viridis*, *Celtis tenuifolia*, *Prunus americana*, and *Pinus*. Adults can also be collected from beating *Vitis*.
- Trachyderes mandibularis Dupont** (Trachyderini, Plate 15f, 20 mm). This species is widespread throughout the Neotropics and southern U. S. Adults are active from June–August. Larval hosts include *Baccharis*, *Parkinsonia*, *Acacia*, *Pithecellobium*, *Ficus*, and *Salix*. Adults are attracted to rotting fruit, and flowers of *Croton*, *Solidago*, and other genera.
- Tragidion coquus (Linnaeus)** (Trachyderini, Plate 15k, two variants shown, 19 mm). Adults of this central and eastern U. S. species are active from June–November. Larvae develop in *Quercus* and *Cercis*. Adults can be collected on flowering plants such as *Helianthus annuus* and *Grindelia*.
- Tylonotus bimaculatus Haldeman** (Hesperophanini, Plate 20l, 13 mm). Adults of this widespread but uncommon eastern U. S. species are active from May–August. Larvae feed in live or dying hardwoods, especially *Fraxinus*, but also *Ulmus*, *Carya*, *Juglans nigra*, *J. cinerea*, and *Betula*.
- Tylonotus masoni (Knull)** (Hesperophanini, Plate 19i, 11 mm). Adults of this very rare eastern U. S. species are active from June–August. Larval feeding habits are unknown.
- Xylotrechus aceris Fisher** (Clytini, Plate 14j, 10 mm). Adults of this uncommon eastern U. S. species are active from June–August. Larvae develop in live *Acer*, inducing galls.

- Xylotrechus annosus annosus* (Say) (Clytini, Plate 15d, 12 mm). Adults of this uncommon eastern U. S. species are active from May–July. Larvae develop in dead and dying *Salix* and *Populus*.
- Xylotrechus colonus* (Fabricius) (Clytini, Plate 15a, 12 mm). Adults of this very common and widespread species are active from April–October. Larvae develop in virtually all eastern hardwoods, especially *Carya*, *Fagus*, and also *Pinus*.
- Xylotrechus convergens* LeConte (Clytini, Plate 14m, 10 mm). Adults of this uncommon eastern U. S. species are active from June–July. Larvae mine in *Crataegus viridis*.
- Xylotrechus integer* (Haldeman) (Clytini, Plate 15c, 13 mm). Adults of this northeastern long-horned beetle are active from June–July. Larvae feed in *Abies balsamea* and *Tsuga*.
- Xylotrechus nitidus* (Horn) (Clytini, Plate 14l, 10 mm). Adults of this northeastern and central U. S. species are active from June–July. Larval feeding habits are unknown.
- Xylotrechus quadrimaculatus* (Haldeman) (Clytini, Plate 14k, 12 mm). Adults of this northeastern U. S. and southern Canada species are active from May–August. Larvae are girdlers of live branches of *Fagus*, *Betula*, *Alnus*, and *Carpinus caroliniana*.
- Xylotrechus sagittatus* (Germar) (Clytini, Plate 15b, 14 mm). This species is widespread in the U. S. and Mexico. Adults are active from June–September. Larvae feed in conifers, especially *Pinus*.
- Xylotrechus schaefferi* Schott (Clytini, Plate 14n, 7 mm). Adults of this uncommon northeastern U. S. species are active from June–August. Larvae feed in cones of *Pinus rigida* and *P. banksiana*.
- Zagymnus clerinus* (LeConte) (Agallissini, Plate 18c, two variants shown, 13 mm). Adults of this uncommon Florida species are active in June. Larvae develop in *Sabal palmetto*.

### LAMIINAE

- Acanthocinus nodosus* (Fabricius) (Acanthocinini, Plate 31a, 24 mm). Adults of this widespread southern U. S. species are active from April–October. Larvae develop in dead or dying pine, especially *Pinus rigida* and *P. taeda*.
- Acanthocinus obsoletus* (Olivier) (Acanthocinini, Plate 31d, 12 mm). Adults of this uncommon eastern U. S. species are active from April–September. Larvae feed in *Pinus*.
- Acanthocinus pusillus* Kirby (Acanthocinini, Plate 31e, 9 mm). Adults of this eastern species are active from May–August. Larvae feed in dead or dying *Pinus* and other conifers, especially *Abies* and *Tsuga*.
- Adetus brousi* (Horn) (Apomecynini, Plate 26h, 7 mm). Adults of this uncommon central and eastern U. S. species are active from June–July. Known larval hosts include *Cucurbita*.
- Aegomorphus modestus* (Gyllenhal) (Acanthoderini, Plate 30h, 11 mm). Adults of this widespread eastern U. S. and Bahamian species are active from May–September. Larvae feed in hardwoods such as *Acer*, *Betula*, *Carya*, *Castanea*, *Celtis*, *Fagus*, *Fraxinus*, and many others, as well as *Pinus*.
- Aegomorphus morrisii* (Uhler) (Acanthoderini, Plate 30g, 16 mm). Adults of this rare and localized eastern U. S. species are active from June–July. Larvae feed *Nyssa aquatica*, *N. sylvatica*, and possibly *Liriodendron*.
- Aegomorphus quadrigibbus* (Say) (Acanthoderini, Plate 30f, 10 mm). Adults are active from April–September. Larvae feed in tree genera including *Acer*, *Betula*, *Carya*, *Castanea*, *Celtis*, *Cercis*, *Fagus*, *Liriodendron*, *Quercus*, *Ulmus*, and others.
- Alcidion umbraticus* (Jacquelin du Val) (Acanthocinini, Plate 28f, 7 mm). Adults of this primarily Caribbean species that also occurs in Florida can be collected from June–December. Larval hosts are unknown but may include *Solanum* species.
- Anoplophora glabripennis* (Motschulsky) (Lamiini, Plate 24g, 30 mm). This species, widespread in China and Korea, was introduced into New York in 1996 and Chicago in 1998. Referred to as the Asian Longhorned Beetle, adults are active from June–September. Known larval hosts include *Acer*, *Aesculus*, *Albizia*, *Betula*, *Celtis*, *Platanus*, *Populus*, *Salix*, *Sorbus*, and *Ulmus*, but probably many others can be used by this species.
- Astyliidius parvus* (LeConte) (Acanthocinini, Plate 29b, 5 mm). Adults of this eastern species are active from May–August. Larvae feed in various hardwoods, shrubs, and vines including *Acer*, *Celtis*, *Diospyros virginiana*, *Morus*, *Ulmus*, and others.



- Astylopsis arcuatus* (LeConte)** (Acanthocinini, Plate 28i, 8 mm). Adults of this eastern U. S. species are active from May through October. No larval hosts have been determined.
- Astylopsis collaris* (Haldeman)** (Acanthocinini, Plate 28k, 8 mm). Adults of this eastern U. S. species are active from May–August. Larvae feed in various hardwoods, especially *Quercus* and *Rhus*.
- Astylopsis fascipennis* Schieffer** (Acanthocinini, Plate 29a, 8 mm). This species is known only from southeastern U. S. Adults are active from June–July. Hosts may include *Ulmus* and *Liquidambar styraciflua*.
- Astylopsis macula* (Say)** (Acanthocinini, Plate 28g, 8 mm). Adults of this common eastern U. S. species are active from May–September. Larvae feed in hardwoods, shrubs, and vines, especially *Castanea*, *Tilia*, and *Acer*.
- Astylopsis perplexa* (Haldeman)** (Acanthocinini, Plate 28j, 10 mm). This species occurs in the southeastern U. S. to Texas. The only known larval host is *Baccharis halimifolia*.
- Astylopsis sexguttata* (Say)** (Acanthocinini, Plate 28h, 7 mm). Adults are active from April–September. Larvae feed under bark of conifers, especially *Larix*, *Picea*, and *Pinus*.
- Ataxia crypta* (Say)** (Pteropliini, Plate 26m, 14 mm). Adults of this southern U. S. species are active from April–October. Larvae feed in the branches of *Quercus*, *Castanea*, and *Pyrus*, and also in *Xanthium*, *Verbesina*, *Ambrosia*, *Smilax*, and *Gossypium*.
- Ataxia falli* Breuning** (Pteropliini, Plate 26k, 13 mm). Adults of this uncommon Florida species are active from April–May. This species has been reared from *Piscidia piscipula* in Florida and adults have been collected by beating *Rhizophora mangle* and *Metopium*.
- Ataxia hubbardi* Fisher** (Pteropliini, Plate 26j, 13 mm). Adults of this central U. S. species are active from April–October. Larvae are stem borers of living herbaceous plants, mostly composites, including *Helianthus*.
- Ataxia spinicauda* Schaeffer** (Pteropliini, Plate 26h, 11 mm). Adults of this uncommon Florida and Caribbean species are active from June–December. Little is known of its habits, although one specimen (along with *A. crypta* and *A. falli*) was taken on fresh cut *Metopium* in June in Florida.
- Cyrtinus pygmaeus* (Haldeman)** (Cyrtinini, Plate 26a, 3 mm). Adults of this widespread eastern U. S. species are active from March–July. Larvae feed in the dry branches of numerous hardwoods, especially *Quercus*. Adults have been collected by beating *Nyssa*, *Sapindus*, and many other trees.
- Dectes sayi* Dillon & Dillon** (Acanthocinini, Plate 30d, 7 mm). Adults of this common central U. S. species are active from May–September. Larvae are stem borers of herbaceous plants, especially *Ambrosia artemisifolia*, but also *Eupatorium*, *Helianthus* and *Xanthium*.
- Dectes texanus* LeConte** (Acanthocinini, Plate 30c, 8 mm). Adults of this common central U. S. species are active from May–September. Larvae are stem borers of *Ambrosia*, *Gaillardia*, *Helianthus*, *Solidago*, and many other herbaceous plants.
- Desmiphora hirticollis* (Olivier)** (Desmiphorini, Plate 26b, 10 mm). This summer active species is widespread throughout the Caribbean and into Mexico, Central and South America, and the southern U. S. Larval hosts include *Cordia*, among others.
- Dorcaschema alternatum* (Say)** (Dorcaschematini, Plate 26c, 10 mm). Adults of this widespread central and eastern U. S. species are active from April–September. Larvae feed in dead or dying branches of *Morus*, *Maclura pomifera*, and *Aesculus glabra*.
- Dorcaschema cinereum* (Olivier)** (Dorcaschematini, Plate 26f, 9 mm). Adults are active from May–August. Larvae feed in dead branches of various hardwoods including *Morus* and *Aesculus glabra*.
- Dorcaschema nigrum* (Say)** (Dorcaschematini, Plate 26d, 9 mm). Adults are active from May–August. Larvae develop in *Carya* and *Aesculus glabra*.
- Dorcaschema wildii* Uhler** (Dorcaschematini, Plate 26e, 16 mm). Adults of this uncommon but widespread central and eastern U. S. species are active from May–October. Larvae develop in live *Morus*, *Maclura pomifera*, and *Aesculus glabra*.
- Dorcasta cinerea* (Horn)** (Apomecynini, Plate 25m, 8 mm). Adults of this common central and southern U. S. species are active from June–October. Larvae are stem borers of living herbaceous plants including *Solanum*, *Gossypium*, *Nicotiana*, *Matelea*, *Helianthus annuus*, *Verbesina*, *Croton capitatus*, and others. Adults have also been collected on *Medicago*.

- Ecyrus dasycerus* (Say) (Pogonocherini, Plate 26l, 7 mm). Adults of this eastern U. S. species are active from April–August. Larvae feed in numerous hardwoods, especially *Quercus* and *Celtis occidentalis*.
- Eupogonius annulicornis* Fisher (Desmiphorini, Plate 27d, 4 mm). Adults of this generally uncommon eastern U. S. species are active from March–August. Larvae feed in numerous hardwoods, shrubs, and vines including *Bursera simaruba*.
- Eupogonius pauper* LeConte (Desmiphorini, Plate 30b, 5 mm). Adults of this common eastern U. S. species are active from March–August. Larvae feed in numerous hardwoods, shrubs, and vines.
- Eupogonius subarmatus* (LeConte) (Desmiphorini, Plate 29l, 5 mm). Adults of this common eastern U. S. species are active from May–August. Larvae feed in various hardwoods, including *Tilia* and *Ulmus*.
- Eupogonius tomentosus* (Haldeman) (Desmiphorini, Plate 30a, 6 mm). Adults of this common eastern U. S. species are active from March–November. Larvae feed in *Pinus*, *Picea*, and *Chamaecyparis*.
- Eutrichillus biguttatus* (LeConte) (Acanthocinini, Plate 30l, 7 mm). Adults of this generally uncommon eastern U. S. species are active from May–August. Larvae develop in *Pinus*.
- Goes debilis* LeConte (Lamiini, Plate 25f, 12 mm). Adults of this widespread eastern U. S. species are active from May–August. Larvae feed in living *Quercus*. *Carya* and *Castanea* are also mentioned in some literature as potential hosts.
- Goes pulcher* (Haldeman) (Lamiini, Plate 25c, 22 mm). Adults of this uncommon species are active from May–August. Larvae feed in living *Carya* (including *C. illinoensis*). *Ulmus* and *Quercus* are potential hosts.
- Goes pulverulentus* (Haldeman) (Lamiini, Plate 25d, 20 mm). Adults of this widespread but uncommon eastern U. S. species are active from May–August. Larvae feed in *Quercus*, *Fagus*, and *Platanus*. *Pinus* and *Prunus serotina* are potential hosts.
- Goes tessellatus* (Haldeman) (Lamiini, Plate 25h, 25 mm). Adults of this widespread eastern U. S. species fly from May–September. Larvae feed in living hardwoods, especially *Quercus*.
- Goes tigrinus* (DeGeer) (Lamiini, Plate 25i, 29 mm). Adults of this widespread but uncommon eastern U. S. species are active from May–October, but most abundant in June–July. Larvae feed in living hardwoods, especially *Quercus*.
- Goes tumifrons* Chemsak & Linsley (Lamiini, Plate 25g, 24 mm). Adults of this uncommon eastern U. S. species are active from July–September. Larval feeding habits are unknown.
- Goes variegatus* Linsley & Chemsak (Lamiini, Plate 25e, 12 mm). Adults of this uncommon eastern and central U. S. species are active from June–July. Larval feeding habits are unknown.
- Hebestola nebulosa* Haldeman (Lamiini, Plate 24e, 10 mm). Adults of this uncommon eastern U. S. species are active from May–July. Larvae feed in *Quercus* and *Castanea*.
- Hemierana marginata* (Fabricius) (Hemilophini, Plate 22h, 6 mm). Adults of this central and eastern U. S. species are active from April–August. Larvae feed in *Vernonia* and *Lithospermum carolinense*. Adults are associated with *Heliopsis helianthoides* var. *occidentalis*.
- Hippopsis lemniscata* (Fabricius) (Agapanthiini, Plate 25n, 10 mm). Adults of this common central and southern U. S. species are active from April–October. Larvae are stem borers of living herbaceous plants, mostly composites (especially *Ambrosia*).
- Hyperplatys aspersa* (Say) (Acanthocinini, Plate 31g, 5 mm). Adults are active from March–September. Larval hosts include various hardwoods as well as *Menispermum* and *Arctium*.
- Hyperplatys femoralis* Haldeman (Acanthocinini, Plate 31i, 5 mm). This uncommon species occurs in the southeastern U. S. Adults have been collected in April and May. No larval hosts are known.
- Hyperplatys maculata* Haldeman (Acanthocinini, Plate 31h, 5 mm). Adults are active from May–October. Larvae feed in various hardwoods, especially *Tilia*, *Menispermum*, *Amelanchier arborea*, and *Aesculus pavia*.
- Lagocheirus araneiformis stroheckeri* Dillon (Acanthocinini, Plate 30j, 18 mm). This southern Florida and Cuban subspecies is active most months of the year. The only known host is *Bursera simaruba*.



- Leptostylopsis albofasciatus* (Fisher)** (Acanthocinini, Plate 29h, 6 mm). This species is known only from Florida and Cuba. The only known larval host is *Rhizophora mangle*.
- Leptostylopsis argentatus* (Jacquelin du Val)** (Acanthocinini, Plate 29d, 9 mm). Adults of this very common Florida and Caribbean species can be collected from June–December. Larval hosts include *Conocarpus erectus*, *Zanthoxylum fagara*, and *Zanthoxylum flavum*.
- Leptostylopsis planidorsus* (LeConte)** (Acanthocinini, Plate 29i, 8 mm). Adults of this southeast U. S. species are active from May–August. Larvae feed in *Betula*, *Cercis canadensis*, *Vitis*, and *Quercus laurifolia*.
- Leptostylopsis terraecolor* (Horn)** (Acanthocinini, Plate 29g, 9 mm). This species is endemic to Florida. It develops in *Rhizophora mangle*, *Ficus citrifolia*, *Metopium*, *Cojoba arborea*, *Piscidia piscipula*, *Vitis*, *Ficus aurea*, *Bursera simaruba*, *Forestiera segregata*, and *Rhizophora mangle*.
- Leptostylus asperatus* (Haldeman)** (Acanthocinini, Plate 29e, 8 mm). Adults of this southern U. S. species are active from April–August. Larvae feed in *Quercus* and *Rhus*.
- Leptostylus transversus* (Gyllenhal)** (Acanthocinini, Plate 29f, 8 mm). Adults of this common eastern species are active from March–October. Larvae feed in various hardwoods, vines, and conifers including, among others, *Quercus stellata*, *Q. macrocarpa*, *Aesculus pavia*, and *Pinus*.
- Lepturges angulatus* (LeConte)** (Acanthocinini, Plate 32j, 7 mm). Adults of this common eastern and central U. S. species are active from March–August. Larvae feed in various trees including *Pinus*, *Amelanchier arborea*, *Gymnocladus dioica*, *Celtis tenuifolia*, *Aesculus pavia*, *Celtis laevigata*, and *Parkinsonia aculeata*.
- Lepturges confluens* (Haldeman)** (Acanthocinini, Plate 32k, 7 mm). Adults of this common eastern and central U. S. species are active from May–August. Larvae feed in various hardwoods, including *Carya laciniata* and *C. illinoensis*.
- Lepturges megalops* Hamilton** (Acanthocinini, Plate 31j, 6 mm). This rare species is known from Florida and Panama. No larval hosts are known.
- Lepturges pictus* (LeConte)** (Acanthocinini, Plate 32i, 6 mm). Adults of this uncommon eastern U. S. species are active from May–August. Larvae feed in *Celtis* (including *C. occidentalis* and *C. tenuifolia*), *Juglans*, and *Carya*.
- Lepturges regularis* (LeConte)** (Acanthocinini, Plate 31f, 6 mm). Adults are active from May–October. Larvae feed in the branches of *Aesculus pavia* and sometimes *Carya*.
- Lepturges symmetricus* (Haldeman)** (Acanthocinini, Plate 32h, 6 mm). Adults of this uncommon species are active from May–August. Larvae develop in the branches of *Tilia*.
- Liopinus alpha* (Say)** (Acanthocinini, Plate 32b, 5 mm). Adults of this eastern and central U. S. species are active from March–October. Larvae develop in the branches of numerous hardwoods, shrubs, and vines.
- Liopinus mimeticus* (Casey)** (Acanthocinini, Plate 32c, 5 mm). Adults of this common eastern and central U. S. species are active from April–October. Larvae feed in various hardwoods and shrubs, including *Acer*, *Quercus*, *Carya*, *Lysiloma latisiliquum*, *Gleditsia triacanthos*, *Ebenopsis ebano*, and *Parkinsonia aculeata*.
- Liopinus misellus* (LeConte)** (Acanthocinini, Plate 32a, 4 mm). Adults of this eastern species are active from April–August. Larvae feed in various hardwoods, including *Acer*, *Quercus* (including *Q. phellos* and *Q. velutina*), *Carya*, *Betula nigra*, and *Crataegus viridis*.
- Liopinus punctatus* (Haldeman)** (Acanthocinini, Plate 31k, 4 mm). Adults of this common eastern U. S. species are active from March–August. Larvae develop in various hardwoods including *Celtis*, *Diospyros virginiana*, *Carpinus caroliniana*, *Carya cordiformis*, *C. illinoensis*, and *Crataegus viridis*.
- Lysimena fuscata* Haldeman** (Pogonocherini, Plate 27e, 9 mm). Adults of this widespread but uncommon eastern U. S. and Caribbean species are active from April–May. Adults have been reared from *Quercus inopina*, *Q. agrifolia*, *Persea*, and *Prunus*.
- Mecas cana cana* (Newman)** (Phytoeciini, Plate 23a, 10 mm). This subspecies occurs only in Florida, and adults are active from April through August. Larval hosts include *Ambrosia* and *Flaveria linearis*.

- Mecas cana saturnina* LeConte** (Phytoeciini, Plate 23b, 12 mm). Adults of this common central and eastern U. S. subspecies are active from April–August. Larvae feed in the stems of living composites, especially *Ambrosia*, *Gaillardia*, and *Helianthus*.
- Mecas cineracea* Casey** (Phytoeciini, Plate 23c, 8 mm). Adults are active from April–August. Larvae feed in the stems of living composites. Adults have been collected sweeping many plants, including *Helenium*.
- Mecas femoralis* (Haldeman)** (Phytoeciini, Plate 22i, 6 mm). This rarely collected southeast U. S. species has been taken on *Aster* in the sandhill–scrub oak community of Florida. No larval hosts are known.
- Mecas marginella* LeConte** (Phytoeciini, Plate 23d, 8 mm). This is a widespread southern U. S. species. Larvae bore in many herbaceous plants. Adults are associated with many wildflowers from April to June.
- Mecas pergrata* (Say)** (Phytoeciini, Plate 22j, 8 mm). Adults are active from April–July. Larvae are stem and root borers of *Aster* and other composites. Adults can be collected on many wildflowers from April to June.
- Microgoes oculatus* (LeConte)** (Lamiini, Plate 24j, 9 mm). Adults are active from June–August. Larvae feed beneath the bark of numerous hardwoods as well as *Pinus*.
- Monochamus carolinensis* (Olivier)** (Lamiini, Plate 25a, 17 mm). Adults of this widespread U. S. species are active from April–September. Larvae feed in dead and dying *Pinus*.
- Monochamus marmorator* Kirby** (Lamiini, Plate 24k, 21 mm). Adults of this common U. S. species are active from June–September. Larvae feed in dead and dying *Abies* and *Picea*.
- Monochamus notatus* (Drury)** (Lamiini, Plate 24l, 19 mm). Adults are active from May–September. Larvae feed in dead and dying conifers, especially *Pinus*, but also *Abies*, *Picea*, and *Pseudotsuga*.
- Monochamus scutellatus* (Say)** (Lamiini, Plate 24h, 18 mm). Adults of this common and widespread U. S. species are active from April–September. Larvae feed in dead and dying conifers, especially *Pinus*, but also *Abies*, *Larix*, and *Picea*.
- Monochamus titillator* (Fabricius)** (Lamiini, Plate 25b, 24 mm). Adults of this widespread central and eastern U. S. and Bahamian species are active from March–October. Larvae feed in dead and dying *Pinus*, *Abies*, and *Picea*.
- Neoptychodes trilineatus* (Linnaeus)** (Lamiini, Plate 24i, 21 mm). This species is primarily Caribbean and Neotropical in distribution, but gets into the extreme southeastern U. S. Adults are active in the summer in the U. S. part of the range. Although *Ficus* is the primary host, larvae also develop in *Alnus*, *Morus*, *Salix* and *Celtis*.
- Nyssodrysina haldemani* (LeConte)** (Acanthocinini, Plate 28e, 7 mm). Adults of this widespread Neotropical and eastern U. S. species are active from April–November. Larvae feed in *Celtis*, *Ficus aurea*, *Bursera simaruba*, *Jatropha*, and *Forestiera segregata*.
- Oberea affinis* Leng & Hamilton** (Phytoeciini, Plate 23l, 13 mm). Adults of this eastern species are active from June–July. Larvae are stem borers of living *Rubus*.
- Oberea caseyi* Plavilstshikov** (Phytoeciini, Plate 24a, 10 mm). Adults of this uncommon eastern species are active from May–August. Larvae develop in *Salix*.
- Oberea delongi* Knull** (Phytoeciini, Plate 23g, 10 mm). Adults of this widespread eastern and central U. S. and southeastern Canada species are active from May–August. Larvae feed in living *Populus*.
- Oberea flavipes* Haldeman** (Phytoeciini, Plate 23h, 10 mm). Adults of this generally uncommon species are active from May–July. Larvae are stem borers of living *Phlox*.
- Oberea gracilis* (Fabricius)** (Phytoeciini, Plate 23f, 13 mm). Adults of this widespread eastern U. S. species are active from April–August. Larvae develop in seedling oaks including *Quercus alba* and *Q. falcata*.
- Oberea myops* Haldeman** (Phytoeciini, Plate 24c, 16 mm). Adults of this eastern species are active from May–July. Larvae feed in the branches of living *Rhododendron*, *Vaccinium*, *Azalea*, and other genera.
- Oberea ocellata* Haldeman** (Phytoeciini, Plate 24d, 11 mm). Adults of this widespread eastern and central U. S. species are active from April–September. Larvae feed in the branches of living *Rhus*, *Malus*, *Prunus*, and other hardwoods. Adults are often collected on *Rhus*.



- Oberea perspicillata* Haldeman** (Phytoeciini, Plate 23m, 10 mm). Adults of this widespread eastern and central U. S. and southern Canada species are active from April–August. Larvae are stem borers of living *Rubus* and *Rosa*.
- Oberea praelonga* Casey** (Phytoeciini, Plate 23k, 10 mm). Adults are active from May–July. Larvae feed in *Cornus* and *Viburnum*. Note that this species treatment includes *O. deficiens* Casey which is morphologically identical and a potential synonym of *O. praelonga* Casey.
- Oberea ruficollis* (Fabricius)** (Phytoeciini, Plate 23e, 15 mm). Adults of this widespread eastern U. S. species are active from May–August. Larvae bore in stems and roots of living *Sassafras* and *Lindera*.
- Oberea schaumii* LeConte** (Phytoeciini, Plate 24b, 12 mm). Adults of this widespread eastern North American species are active from May–July. Larvae are girdlers of the living branches of *Populus*. Note that this species treatment includes *O. pruinosa* Casey which is morphologically identical and a potential synonym of *O. schaumii*.
- Oberea tripunctata* (Swederus)** (Phytoeciini, Plate 23j, 10 mm). Adults of this widespread eastern and central North American species are active from May–August. Larvae bore in living branches of *Cornus*, *Prunus*, *Viburnum*, *Ulmus*, *Oxydendrum arboreum*, *Vaccinium*, *Rhododendron*, *Populus*, *Salix*, and *Morus*.
- Oberea ulmicola* Chittenden** (Phytoeciini, Plate 23i, 9 mm). Adults of this uncommon eastern U. S. species are active from May–July. Larvae feed in *Ulmus* and *Prunus*.
- Oncideres cingulata* (Say)** (Onciderini, Plate 27e, 16 mm). Adults of this common U. S. species are active from April–November. Larvae girdle branches of numerous hardwoods and shrubs, especially *Diospyros virginiana*, *Carya*, *Juglans*, *Celtis*, and *Ulmus*, but also occasionally *Quercus* and *Prunus*.
- Oplosia nubila* (LeConte)** (Acanthoderini, Plate 30i, 10 mm). Adults of this generally uncommon eastern U. S. species are active from May–July. Larvae feed under bark of *Tilia*, *Carya*, and *Fagus*.
- Parmenonta thomasi* Chemsak & Linsley** (Apomecynini, Plate 26g, 7 mm). This rare species is endemic to Florida. Adults have been collected in June and December. Nothing is known of potential host plants.
- Phaea monostigma* (Haldeman)** (Tetraopini, Plate 22b, 9 mm). Adults of this uncommon central and eastern U. S. species are active from May–July. Larvae feed in the living stems of *Ipomoea*.
- Plectrodera scalator* (Fabricius)** (Lamiini, Plate 24f, 30 mm). Adults of this widespread central and southern U. S. species are active from May–September. Larvae develop in *Populus* and *Salix*.
- Pogonocherus mixtus* Haldeman** (Pogonocherini, Plate 29k, 5 mm). Adults of this moderately common North American species are active from May–September. Larvae feed in conifers (especially *Larix*, *Picea*, and *Pinus*) and hardwoods including *Salix* and *Pyrus*.
- Pogonocherus penicillatus* LeConte** (Pogonocherini, Plate 29j, 5 mm). Adults of this northern U. S. species are active from July–August. Larvae develop in *Picea*.
- Psenocerus supernotatus* (Say)** (Desmiphorini, Plate 27a, 4 mm). Adults of this common central and eastern U. S. species are active from April–June. Larval hosts include *Liriodendron tulipifera*, *Crataegus viridis*, and *Salix nigra*. Adults have also been taken on *Acer*.
- Saperda candida* Fabricius** (Saperdini, Plate 27j, 17 mm). Adults of this eastern North American species are active from May–August. Larvae feed in living *Malus*, *Cydonia oblonga*, *Crataegus*, and many related genera, mostly in the family Rosaceae.
- Saperda calcarata* Say** (Saperdini, Plate 28b, 25 mm). Adults of this widespread central and eastern North American species are active from May–September. Larvae feed in *Populus* (especially *Populus tremuloides* and *Populus deltoides*).
- Saperda cretata* Newman** (Saperdini, Plate 27k, 14 mm). Adults of this widespread eastern and central U. S. species are active from May–August. Larvae develop in *Malus* and *Crataegus*.
- Saperda discoidea* Fabricius** (Saperdini, Plate 27g, 11 mm). Adults of this widespread eastern and central U. S. and southeast Canada species are active from April–September. Larvae feed in *Carya*, *Juglans cinerea*, *J. nigra*, and occasionally other hardwoods.
- Saperda imitans* Felt & Joutel** (Saperdini, Plate 27m, 11 mm). Adults of this rare eastern U. S. species are active from May–July. Larvae feed in various dead hardwoods including *Carya*, *Prunus*, and *Salix*.

- Saperda inornata* Say** (Saperdini, Plate 27h, 10 mm). Adults of this northern U. S. and southern Canada species are active from March–July. Larvae feed in living *Populus* and *Salix*, making galls in the smaller branches and saplings.
- Saperda lateralis* Fabricius** (Saperdini, Plate 27l, 10 mm). Adults of this widespread eastern and central U. S. species are active from May–August. Larvae feed in various dead hardwoods and shrubs, including *Carya*, *Ulmus*, *Tilia*, *Fraxinus*, *Quercus*, *Acer*, and *Toxicodendron*. *Pinus* is a questionable host that has been mentioned in the literature.
- Saperda mutica* Say** (Saperdini, Plate 28c, 11 mm). Adults of this central and eastern U. S. species are active from June–July. Larvae feed in dead *Salix*.
- Saperda obliqua* Say** (Saperdini, Plate 28d, 15 mm). Adults of this widespread eastern Canada and U. S. species are active from June–August. Larvae feed in living *Alnus*, *Betula*, and *Corylopsis*.
- Saperda populnea moesta* LeConte** (Saperdini, Plate 27f, 8 mm). Adults of this northern U. S. and southern Canada species are active from June–August. Larvae feed in the living branches of *Populus* and *Salix*.
- Saperda puncticollis* Say** (Saperdini, Plate 28e, 9 mm). Adults of this eastern North American species are active from May–August. Larvae feed in dead and dying *Parthenocissus quinquefolia*, *Toxicodendron radicans*, and *Vitis*.
- Saperda tridentata* Olivier** (Saperdini, Plate 27n, 11 mm). Adults of this widespread eastern and central U. S. species are active from April–October. Larvae feed in *Ulmus*.
- Saperda vestita* Say** (Saperdini, Plate 27i, 15 mm). Adults of this widespread eastern and central U. S. and Canada species are active from May–September. Larvae develop in *Acer*, *Tilia*, and occasionally *Populus*.
- Spalacopsis chemsaki* Tyson** (Agapanthiini, Plate 25j, 6 mm). This rare species has been collected in June from only one locality in southern Florida. No host plants are known.
- Spalacopsis filum costulatum* Casey** (Agapanthiini, Plate 25k, 7 mm). Adults of this Florida and Caribbean species can be collected in most months, especially June–July. Larval hosts include *Melothria*, but adults have been taken on fresh cut *Ipomoea*, *Cojoba arborea*, and *Bursera simaruba*.
- Spalacopsis stolata* Newman** (Agapanthiini, Plate 25l, 6 mm). Specimens of this uncommon Florida species have been taken on *Chenopodium botrys*, *Verbesina*, *Flaveria linearis*, *Batis maritima*, and *Bursera simaruba* from April through June.
- Spalacopsis suffusa* Newman** (Agapanthiini, no figure). This rare species has been collected from March through October in southern Florida. No hosts are known.
- Steirastoma breve* (Sulzer)** (Acanthoderini, Plate 30e, 23 mm). This species is widely distributed throughout the Neotropics and has been collected in southern Texas and Florida. It is polyphagous with hosts including *Cocos nucifera*, *Adansonia digitata*, *Bombax ceiba*, *Cecropia*, *Hibiscus*, *Wisteria*, *Salix*, and others.
- Sternidius variegatus* (Haldeman)** (Acanthocinini, Plate 31l, 8 mm). Adults of this common central and eastern U. S. species are active from June–September. Larvae feed in the branches of *Gymnocladus dioicus* and *Aesculus pavia*, among many other hosts.
- Styloleptus biustus* (LeConte)** (Acanthocinini, Plate 29c, 5 mm). Adults of this southeastern U. S. and Caribbean species are active from May–July. Larvae feed in numerous hardwoods and shrubs, including *Carya*. The *minuens* form (currently a morphologically distinct subspecies of *S. biustus*) may deserve species status (C. J. Micheli, pers. comm.).
- Sybra alternans* Wiedemann** (Apomecynini, Plate 26i, 8 mm). This widespread Asian and Pacific Island species was discovered in Florida in 1992. Larvae develop in *Ficus* and *Musa*.
- Tetraopes melanurus* Schoenherr** (Tetraopini, Plate 22d, 9 mm). Adults of this southern U. S. species are active from May–September. Larvae feed in *Asclepias tuberosa*.
- Tetraopes pilosus* Chemsak** (Tetraopini, Plate 22c, 10 mm). Adults of this uncommon central U. S. species are active from June–August. Larvae feed in *Asclepias tuberosa* and *A. arenaria*.
- Tetraopes quinquemaculatus* Haldeman** (Tetraopini, Plate 22f, 9 mm). Adults of this uncommon U. S. species are active from June–September. Larvae feed in *Asclepias hirtella* and adults have been associated with other species such as *A. tuberosa* and *A. amplexicaulis*.

- Tetraopes tetrophthalmus* (Forster)** (Tetraopini, Plate 22g, 12 mm). Adults of this common U. S. species are active from May–September. Larvae feed in various milkweeds (especially *Asclepias syriaca*) and *Apocynum*.
- Tetraopes texanus* Horn** (Tetraopini, Plate 22e, 12 mm). Adults of this uncommon central U. S. species are active from April–August. Larvae feed in *Asclepias hirtella*.
- Tetrops praeusta* Linnaeus** (Tetraopini, Plate 22a, 4 mm). This European species was introduced into the United States. Adults are active from May–July. Larvae feed in various hardwoods and shrubs, especially *Malus* and *Crataegus*.
- Urgleptes facetus* (Say)** (Acanthocinini, Plate 32d, 4 mm). Adults of this common U. S. species are active from May–August. Larvae feed in the branches of various hardwoods, especially *Quercus*, *Crataegus*, *Maclura*, and *Salix*. Adults have also been collected on *Pinus sylvestris*.
- Urgleptes foveatocollis* (Hamilton)** (Acanthocinini, Plate 32f, 4 mm). Adults of this uncommon southern U. S. species are active from July–September. Larval hosts include *Celtis*, *Lantana*, *Lysiloma*, *Piscidia*, and *Avicennia germinans*.
- Urgleptes querci* (Fitch)** (Acanthocinini, Plate 32e, 4 mm). Adults of this common eastern U. S. species are active from May–September. Larvae feed in the branches of numerous hardwoods, shrubs, and vines, especially *Acer* (including *Acer negundo*), *Aesculus glabra*, *Betula nigra*, *Quercus*, *Prunus serotina*, *Salix exigua*, *Carya*, *Morus*, *Vaccinium*, *Viburnum*, *Toxicodendron*, and others.
- Urgleptes signatus* (LeConte)** (Acanthocinini, Plate 32g, 4 mm). Adults of this eastern U. S. species are active from June–August. Larvae feed in the branches of various genera including *Acer*, *Carpinus caroliniana*, *Carya*, *Cornus*, *Quercus*, and *Tilia*.
- Urographis despectus* (LeConte)** (Acanthocinini, Plate 31b, 10 mm). Adults of this uncommon species are active from May–July. Larvae feed in various hardwoods, especially *Carya*.
- Urographis fasciatus* (DeGeer)** (Acanthocinini, Plate 31c, 11 mm). Adults of this common eastern U. S. species are active from April–October. Larvae feed in numerous hardwoods including *Quercus*, and also *Pinus*.
- Urographis triangulifer* (Haldeman)** (Acanthocinini, Plate 30k, 15 mm). Adults of this widespread but generally uncommon central and eastern U. S. species are active from May–October. Larvae feed in *Celtis* and *Acer*.
- Zaplous annulatus* (Chevrolat)** (Pogonocherini, Plate 27b, 4 mm). Adults of this uncommon Florida and Cuba species have been collected in June from *Ilex*.



## Literature and Websites Cited

- Bond, W. B. & T. K. Philips. 1999.** Diversity, phenology, and flower hosts of anthophilous long-horned beetles (Coleoptera: Cerambycidae) in a southeastern Ohio forest. *Entomological News* 110(5):267–278.
- Browne, D. J. & S. B. Peck. 1996.** The long-horned beetles of south Florida (Cerambycidae: Coleoptera): biogeography and relationships with the Bahama Islands and Cuba. *Canadian Journal of Zoology* 74:2154–2169.
- Browne, D. J., S. B. Peck, & M. A. Ivie. 1993.** The Longhorn beetles (Coleoptera Cerambycidae) of the Bahama Islands with an analysis of species–area relationships, distribution patterns, origin of the fauna and an annotated species list. *Tropical Zoology* 6:27–53.
- Cavey, J. F., E. R. Hoebeke, S. Passoa, & S. W. Lingafelter. 1998.** A new exotic threat to North American hardwood forests: An Asian longhorned beetle, *Anoplophora glabripennis* (Coleoptera: Cerambycidae). I. Description and diagnosis of the larva. *Proceedings of the Entomological Society of Washington*, 100(2):373–381.
- Giesbert, E. F. 1993.** A new genus and species of clytine cerambycid (Coleoptera) from Florida. *Insecta Mundi* 7(3):129–131.
- Gressitt, J. L. 1942.** Destructive Long-horned beetle borers at Canton, China. Special Publication No. 1 of Lingnan Natural History Survey and Museum, Lingnan University, Canton, China: 60pp.
- Hanley, G. A. 2005.** Cerambycidae of North Dakota. An atlas and identification guide. Cyril Moore Science Center Science Monograph #3, Minot State University, Minot, North Dakota: 105pp.
- Hoffman, R. L. 2003.** Beetles of the genus *Anthophylax* in Virginia (Coleoptera: Cerambycidae: Lepturinae). *Banisteria* 22:50–52.
- Hoffman, R. L., S. M. Roble, & W. E. Steiner, Jr. 2002.** Thirteen additions to the known beetle fauna of Virginia (Coleoptera: Scirtidae, Bothrideridae, Cleridae, Tenebrionidae, Melyridae, Calirhipidae, Cerambycidae, Chrysomelidae). *Banisteria* 20:53–61.
- Hovore, F. T., R. L. Penrose, & R. W. Neck. 1987.** The Cerambycidae or longhorned beetles of Southern Texas: a faunal survey. *Proceedings of the California Academy of Science* 44(13):283–334.
- Korotyaev, B. A., A. S. Konstantinov, S. W. Lingafelter, M. Y. Mandelshtam, and M. G. Volkovitch. 2005.** Gall-Inducing Coleoptera, pp. 239–271, in: A. Raman, C. W. Schaefer, and T. M. Withers, eds, *Biology, Ecology, and Evolution of Gall-inducing Arthropods*. Science Publishers, Inc., Enfield, NH.
- Lingafelter, S. W. & J. A. Chemsak. 2002.** A new species of *Enaphalodes* Haldeman from Florida (Coleoptera: Cerambycidae) with review of genus, synonymies, and key to species. *Coleopterists Bulletin* 56(4):569–581.
- Lingafelter, S. W. & E. H. Nearns. 2006.** Cerambycidae holotypes of the Smithsonian Institution: an online image database. [www.elaphidion.com].
- Lingafelter, S. W. & E. R. Hoebeke. 2002.** Revision of *Anoplophora* (Coleoptera: Cerambycidae). *Entomological Society of Washington*, Washington, DC. 236pp.
- Lingafelter, S. W. & N. V. Horner. 1993.** The Cerambycidae of north-central Texas. *Coleopterists Bulletin* 47(2):159–191.
- Lingafelter, S. W. & M. A. Ivie. 2005.** Synonymies and transfers in Elaphidiini mostly relating to the genus *Elaphidion* Audinet-Serville (Coleoptera: Cerambycidae). *Journal of the New York Entomological Society* 112(2–3):205–211.
- Linsley, E. G. 1962a.** The Cerambycidae of North America. Part II. Taxonomy and classification of the Parandrinae, Prioninae, Spondylinae and Aseminae. *University of California Publications in Entomology*, 19:1–102.
- Linsley, E. G. 1962b.** The Cerambycidae of North America. Part III. Taxonomy and classification of the subfamily Cerambycinae, tribes Opsimini through Megaderini. *University of California Publications in Entomology* 20:1–188.

## Literature and Websites Cited

- Linsley, E. G. 1963.** The Cerambycidae of North America. Part IV. Taxonomy and classification of the subfamily Cerambycinae, tribes Elaphidionini through Rhinotragini. University of California Publications in Entomology 21:1–165.
- Linsley, E. G. 1964.** The Cerambycidae of North America. Part V. Taxonomy and classification of the subfamily Cerambycinae, tribes Callichromini through Ancylocerini. University of California Publications in Entomology 22:1–197 pp.
- Linsley, E. G., & J. A. Chemsak. 1972.** The Cerambycidae of North America. Part VI, No. 1. Taxonomy and classification of the subfamily Lepturinae. University of California Publications in Entomology 69:1–138.
- Linsley, E. G., & J. A. Chemsak. 1976.** The Cerambycidae of North America. Part VI, No. 2. Taxonomy and classification of the subfamily Lepturinae. University of California Publications in Entomology 80:1–186.
- Linsley, E. G., & J. A. Chemsak. 1984.** The Cerambycidae of North America. Part VII, No. 1: Taxonomy and classification of the subfamily Lamiinae, Tribes Parmenini through Acanthoderini. University of California Publications in Entomology 102:1–258.
- Linsley, E. G., & J. A. Chemsak. 1995.** The Cerambycidae of North America. Part VII, No. 2. Taxonomy and Classification of the Subfamily Lamiinae, Tribes Acanthocinini through Hemilophini. University of California Publications in Entomology 114:1–292.
- Linsley, E. G., & J. A. Chemsak. 1997.** The Cerambycidae of North America. Part VIII: Bibliography, Index, and Host Plant Index. University of California Publications in Entomology 117:1–534.
- MacRae, T. C. 1993.** Annotated checklist of the longhorned beetles (Coleoptera: Cerambycidae and Disteniidae) occurring in Missouri. *Insecta Mundi* 7(4):223–252.
- MacRae, T. C. & M. E. Rice. 2007.** Biological and distributional observations on North American Cerambycidae (Coleoptera). *Coleopterists Bulletin* 61(2).
- Maier, C. T. & C. R. Lemmon. 2000.** Discovery of the Small Japanese Cedar Longhorned Beetle, *Callidiellum rufipenne* (Motschulsky) (Coleoptera: Cerambycidae), in live arborvitae in Connecticut. *Proceedings of the Entomological Society of Washington* 102(3):747–754.
- Monné, M. A. 2001a.** Catalogue of the Neotropical Cerambycidae with known host plant – Part 1: Subfamily Cerambycinae, tribes Achrysonini to Elaphidiini. *Publicações Avulsas do Museu Nacional* 88:1–108.
- Monné, M. A. 2001b.** Catalogue of the Neotropical Cerambycidae with known host plant – Part II: Subfamily Cerambycinae, tribes Graciliini to Trachyderini. *Publicações Avulsas do Museu Nacional* 90:1–119.
- Monné, M. A. 2001c.** Catalogue of the Neotropical Cerambycidae with known host plant – Part III: Subfamily Lamiinae, tribes Acanthocinini to Apomecynini. *Publicações Avulsas do Museu Nacional* 92:1–94.
- Monné, M. A. 2002a.** Catalogue of the Neotropical Cerambycidae with known host plant – Part IV: Subfamily Lamiinae, tribes Batocerini to Xenofreini. *Publicações Avulsas do Museu Nacional* 94:1–92.
- Monné, M. A. 2002b.** Catalogue of the Neotropical Cerambycidae with known host plant – Part V: Subfamilies Prioninae, Parandrinae, Oxypeltinae, Anoplodermatinae, Aseminae and Lepturinae. *Publicações Avulsas do Museu Nacional* 96:1–72.
- Monné, M. A. 2005a.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part I. Subfamily Cerambycinae. *Zootaxa* 946:1–765.
- Monné, M. A. 2005b.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part II. Subfamily Lamiinae. *Zootaxa* 1023:1–759.
- Monné, M. A. 2006.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part III. Subfamilies Parandrinae, Prioninae, Anoplodermatinae, Aseminae, Spondylidinae, Lepturinae, Oxypeltinae, and addenda to the Cerambycinae and Lamiinae. *Zootaxa* 1212:1–244.
- Monné, M. A. and F. T. Hovore. 2005.** Checklist of the Cerambycidae, or longhorned wood-boring beetles (Coleoptera), of the Western Hemisphere. BioQuip Products, Rancho Dominguez, CA. 392 pp.

- Morris, R. F. II. 2002.** Distribution and biological notes for some Cerambycidae (Coleoptera) occurring in the southeastern United States. *Insecta Mundi* 16(4):209–213.
- Perkins, P., P. Naskrecki, & B. Farrell. 2006.** Online database of insect primary types in the collection of the Museum of Comparative Zoology at Harvard University. [<http://mcz-28168.oeb.harvard.edu/mcz/index.htm>].
- Rice, M. E. and D. A. Veal. 2006.** New distribution and adult host records for longhorned beetles (Cerambycidae) from Iowa. *Coleopterists Bulletin* 60(3):255–263.
- Schiefer, T. L. 1998.** A preliminary list of the Cerambycidae and Disteniidae (Coleoptera) of Mississippi. *Transactions of the American Entomological Society* 124(2):113–131.
- Schiefer, T. L. 2000.** A new species of *Astylopsis* Casey (Coleoptera: Cerambycidae: Acanthocinini) from the southeastern United States. *Coleopterists Bulletin* 54(4):533–539.
- Schiefer, T. L. 2001.** Additions and corrections to the list of Cerambycidae (Coleoptera) of Mississippi. *Entomological News* 112(5):334–336.
- Thomas, M. C., S. Hill, R. F. Morris II, & E. H. Nearn. 2006.** The Cerambycidae of Florida. Florida State Collection of Arthropods website. [<http://www.fsca-dpi.org/Coleoptera/Mike/FloridaCerambycids/openingpage.htm>].
- USDA NRCS. 2007.** The PLANTS Database. National Plant Data Center, Baton Rouge, LA. [<http://plants.usda.gov>].
- Vogt, G. B. 1949.** Notes on Cerambycidae from the lower Rio Grande Valley, Texas. *The Pan-Pacific Entomologist* 25(3):137–184.
- Yanega, D. 1996.** Field Guide to Northeastern Longhorned Beetles (Coleoptera: Cerambycidae). Illinois Natural History Survey Manual 6, Champaign, Illinois. 184pp.





## Plates

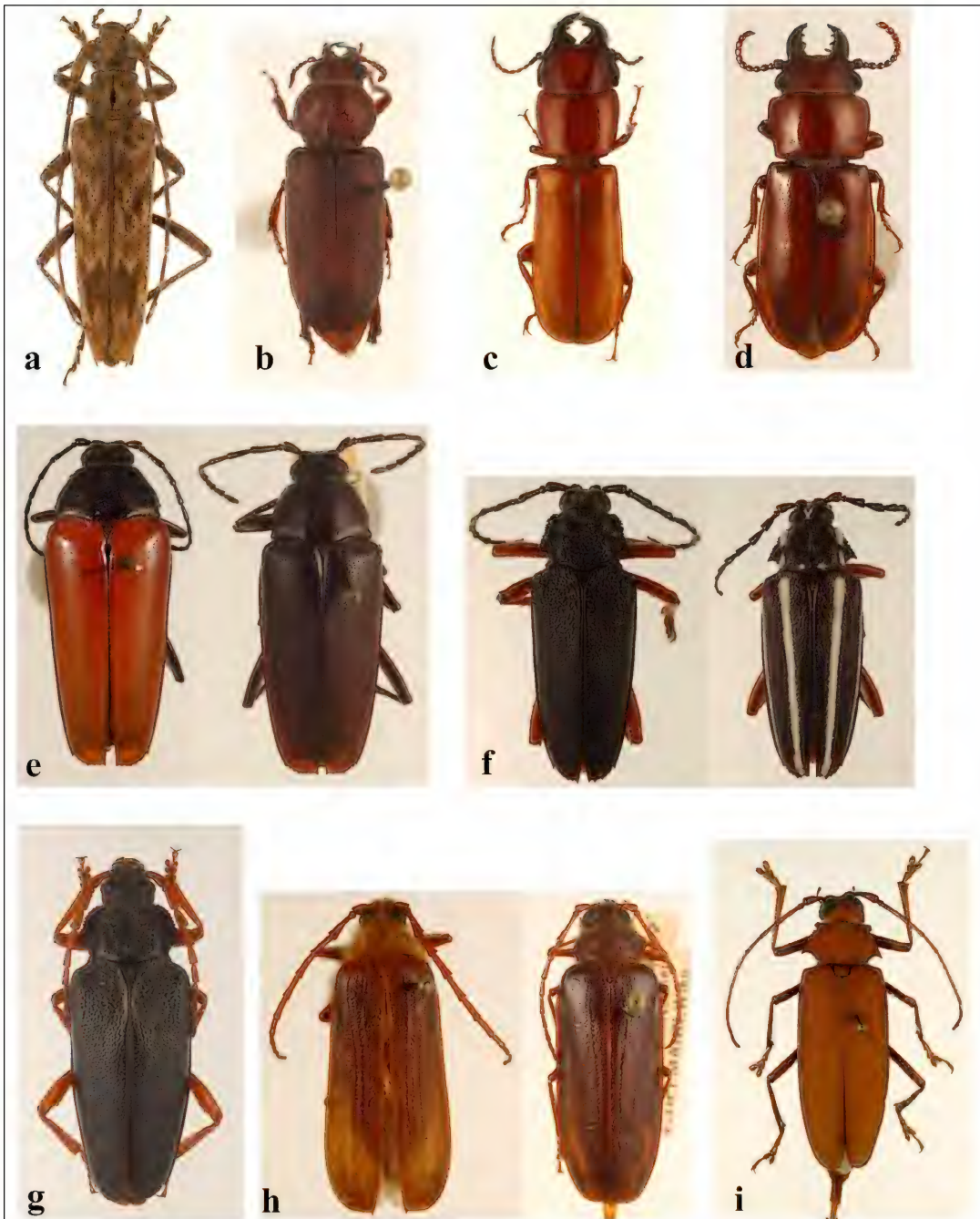


Plate 1.

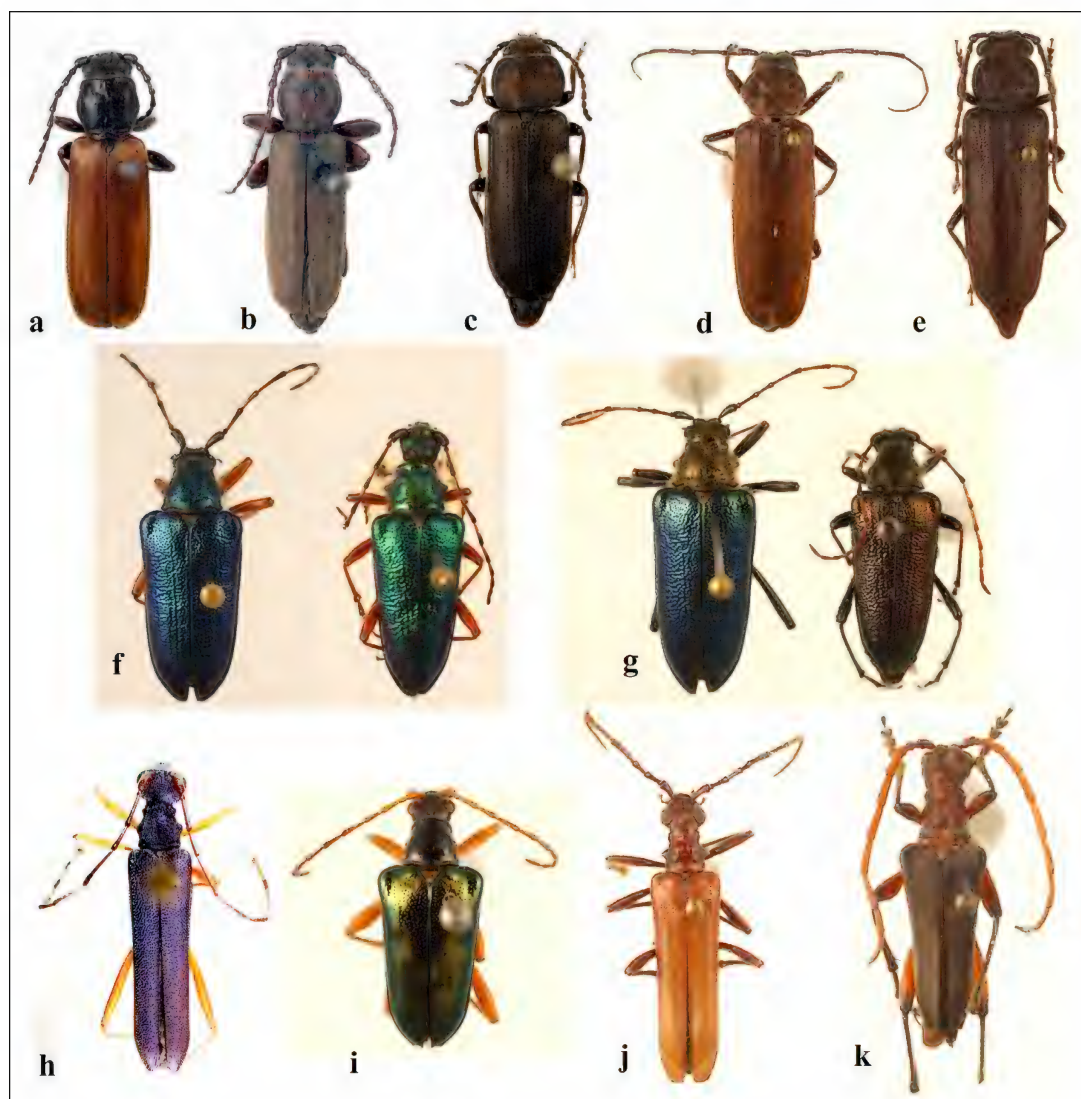
**a)** *Distenia undata* (Fabricius), **b)** *Scaphinus muticus* (Fabricius), **c)** *Hesperandra polita* (Say), **d)** *Neandra brunnea* (Fabricius), **e)** *Sphenostethus taslei* (Buquet), **f)** *Elateropsis rugosus* Gahan, **g)** *Elateropsis scabrosus* Gahan, **h)** *Tragosoma depsarius* (Linnaeus), **i)** *Strongylaspis corticarius* (Erichson).



Plate 2.

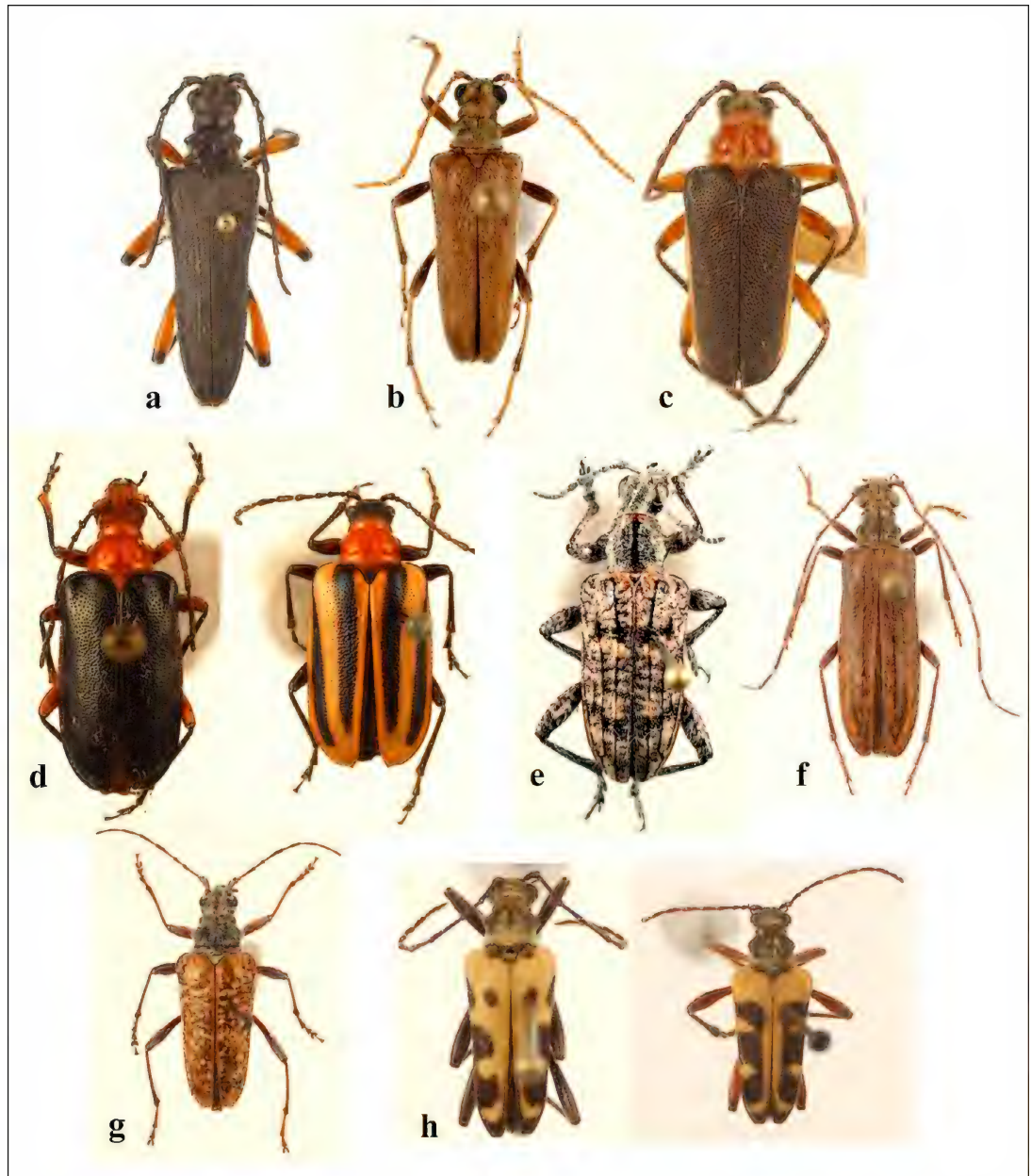
a) *Derobrachus brevicollis* Audinet–Serville, b) *Orthosoma brunneum* (Forster), c) *Prionus fissicornis* Haldeman, d) *Prionus palparis* Say, e) *Prionus debilis* Casey, f) *Prionus imbricornis* (Linnaeus), g) *Prionus laticollis* (Drury), h) *Prionus pocularis* Dalman, i) *Stenodontes chevrolati* Gahan, j) *Archodontes melanopus* (Linnaeus), k) *Mallodon dasystomus* (Say).





**Plate 3.**

**a)** *Tetropium cinnamopterum* Kirby, **b)** *Tetropium schwarbianum* Casey, **c)** *Asemum striatum* (Linnaeus), **d)** *Arhopalus foveicollis* (Haldeman), **e)** *Arhopalus rusticus* (LeConte), **f)** *Anthophylax cyaneus* (Haldeman), **g)** *Anthophylax viridis* LeConte, **h)** *Encyclops caerulea* (Say), **i)** *Gaurotes cyanipennis* (Say), **j)** *Centrodera decolorata* (Harris), **k)** *Stenocorus cylindricollis* (Say).



**Plate 4.**

**a)** *Stenocorus schaumii* (LeConte), **b)** *Stenocorus cinnamopterus* (Randall), **c)** *Gaurotes thoracica* (Haldeman), **d)** *Brachysomida bivittata* (Say), **e)** *Rhagium inquisitor* (Linnaeus), **f)** *Centrodera sublineata* LeConte, **g)** *Anthophylax attenuatus* (Haldeman), **h)** *Evodinus monticola* (Randall).

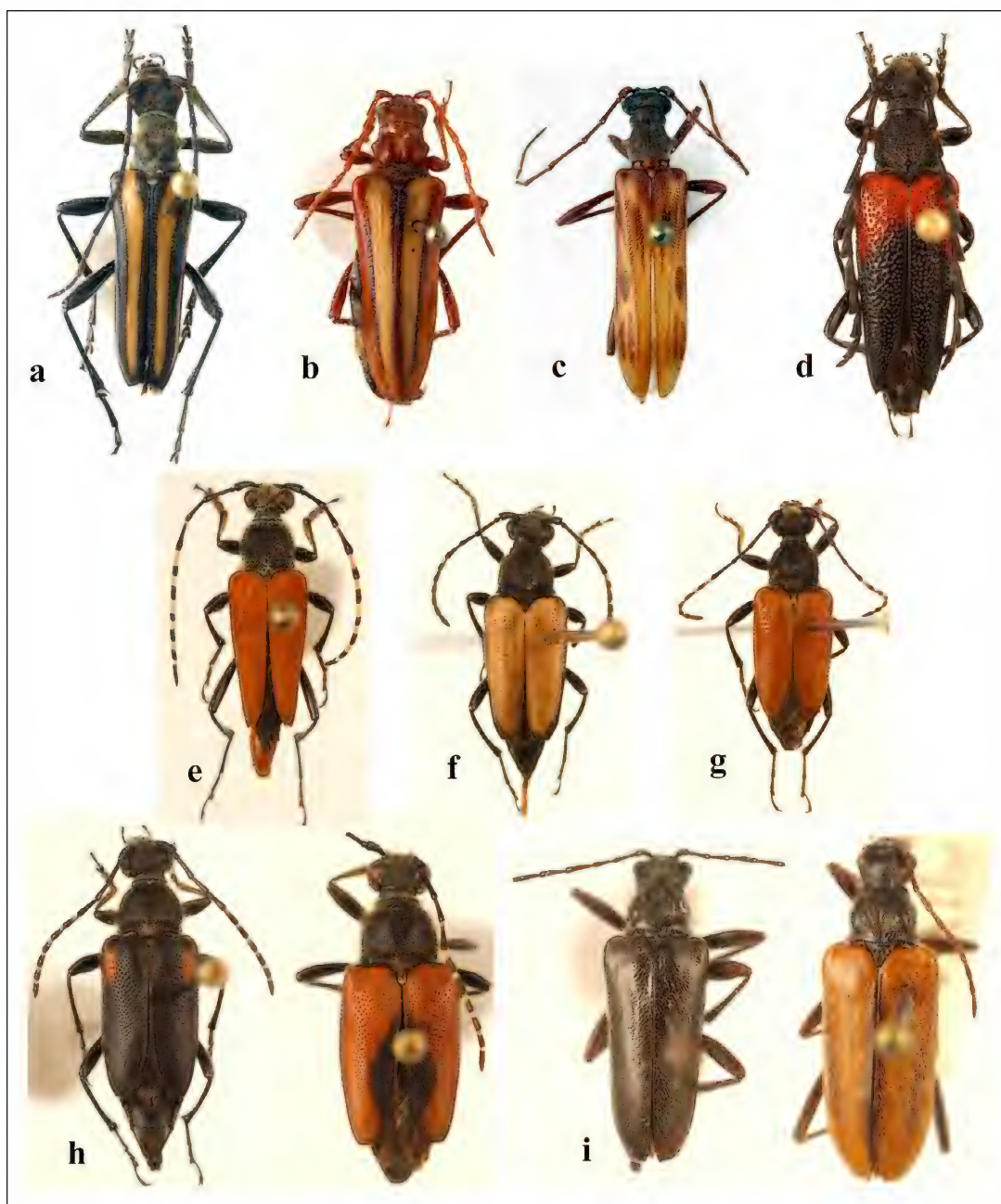
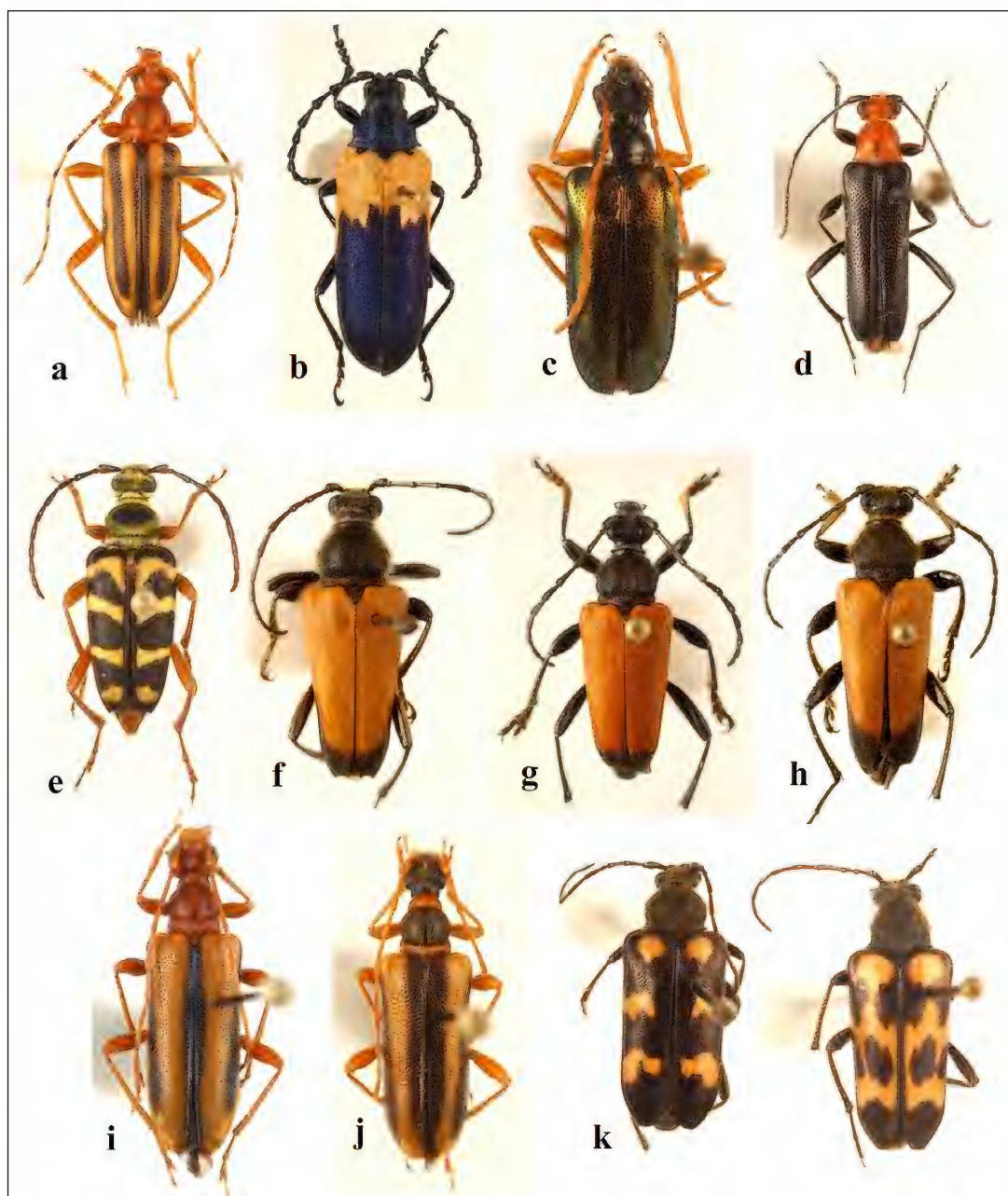


Plate 5.

**a)** *Stenocorus vittiger* (Randall), **b)** *Stenocorus trivittatus* (Say), **c)** *Leptorhabdium pictum* (Haldeman), **d)** *Stictoleptura canadensis* (Olivier), **e)** *Brachyleptura rubrica* (Say), **f)** *Brachyleptura circumdata* (Olivier), **g)** *Brachyleptura champlaini* Casey, **h)** *Brachyleptura vagans* (Olivier), **i)** *Acmaeops proteus* (Kirby).





**Plate 6.**

**a)** *Metacmaeops vittata* (Swederus), **b)** *Desmocerus palliatus* (Forster), **c)** *Pseudogaurotina abdominalis* (Bland), **d)** *Nealosterna capitata* (Newman), **e)** *Strophiona nitens* (Forster), **f)** *Trigonarthris minnesotana* (Casey), **g)** *Trigonarthris atrata* (LeConte), **h)** *Trigonarthris proxima* (Say), **i)** *Pidonia aurata* (Horn), **j)** *Pidonia densicollis* (Casey), **k)** *Judolia montivigans* (Couper).

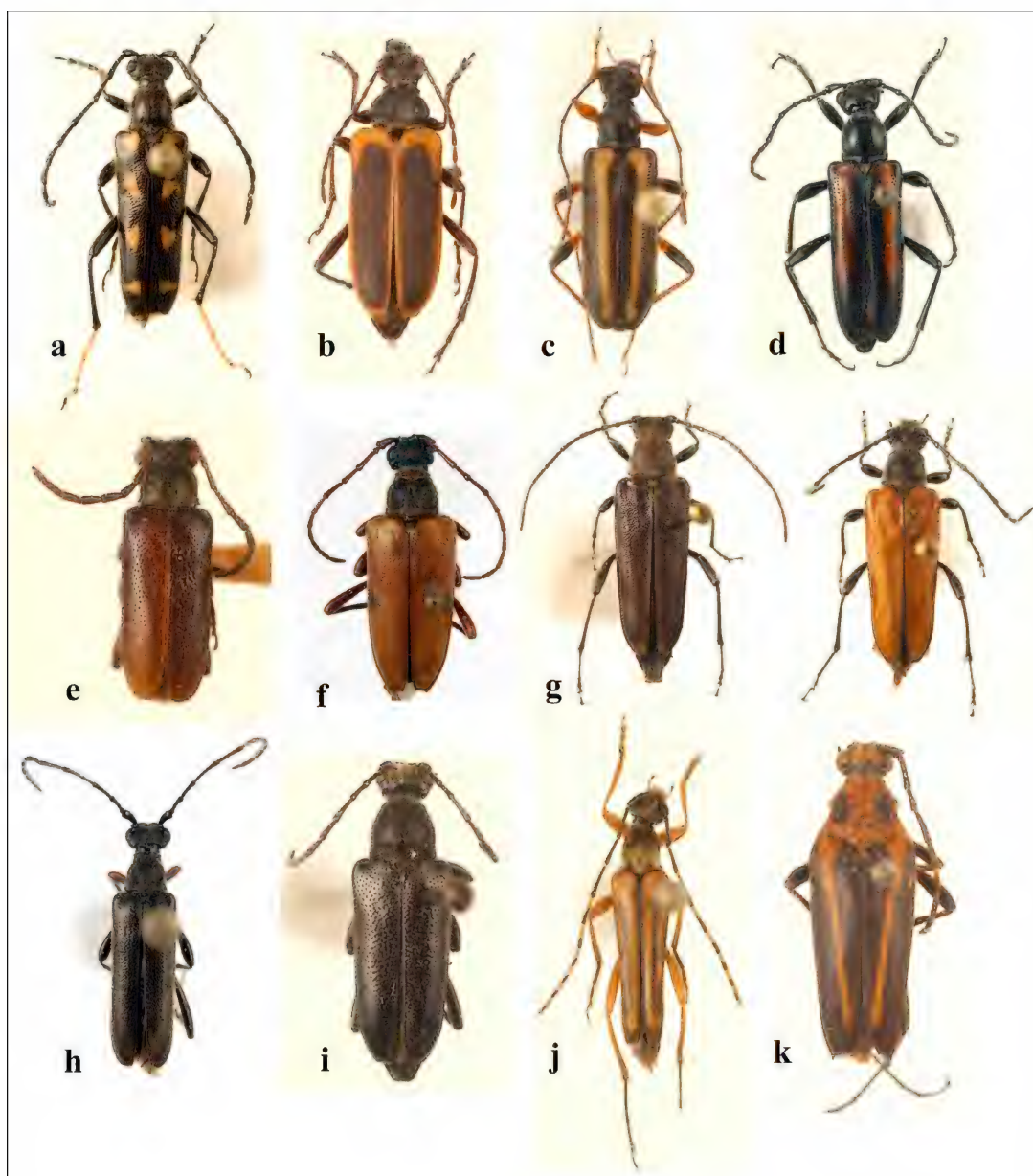
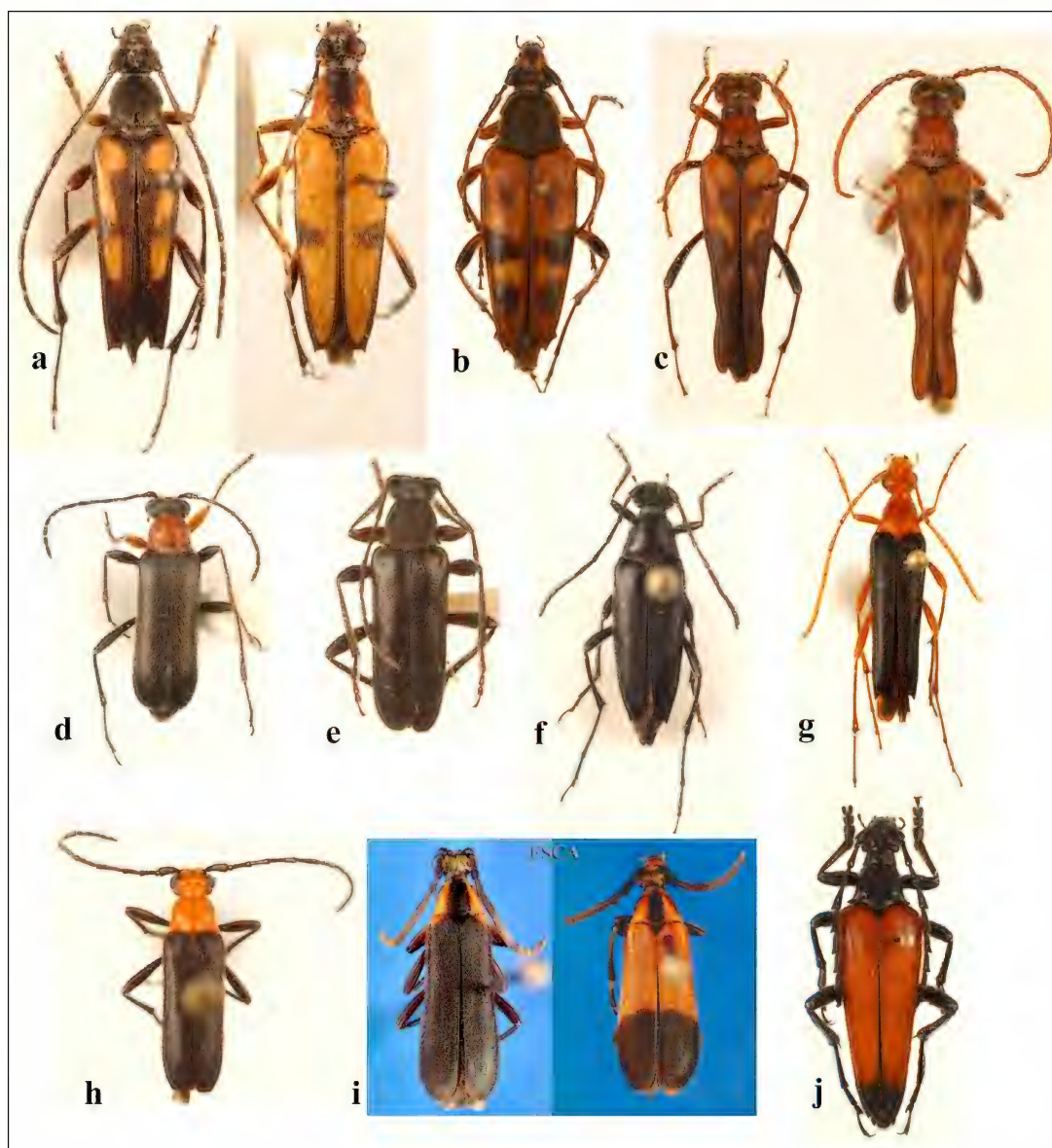


Plate 7.

**a)** *Xestoleptura octonotata* (Say), **b)** *Acmaeops discoideus* (Haldeman), **c)** *Pidonia ruficollis* (Say), **d)** *Strangalepta abbreviata* (Germar), **e)** *Alosternida chalybaea* (Haldeman), **f)** *Lepturopsis biforis* (Newman), **g)** *Trachysida mutabilis* (Newman), **h)** *Idiopidonia pedalis* (LeConte), **i)** *Anoplodera pubera* (Say), **j)** *Analeptura lineola* (Say), **k)** *Leptura abdominalis* (Haldeman).



**Plate 8.**

**a)** *Leptura subhamata* Randall, **b)** *Leptura oblitterata deleta* (LeConte), **c)** *Bellamira scalaris* (Say), **d)** *Grammoptera haematites* (Newman), **e)** *Grammoptera subargentata* (Kirby), **f)** *Typocerus lugubris* (Say), **g)** *Strangalia bicolor* (Swederus), **h)** *Charisalia americana* (Haldeman), **i)** *Lycochoriolaus lateralis* (Olivier), **j)** *Stenelytrana emarginata* (Fabricius).



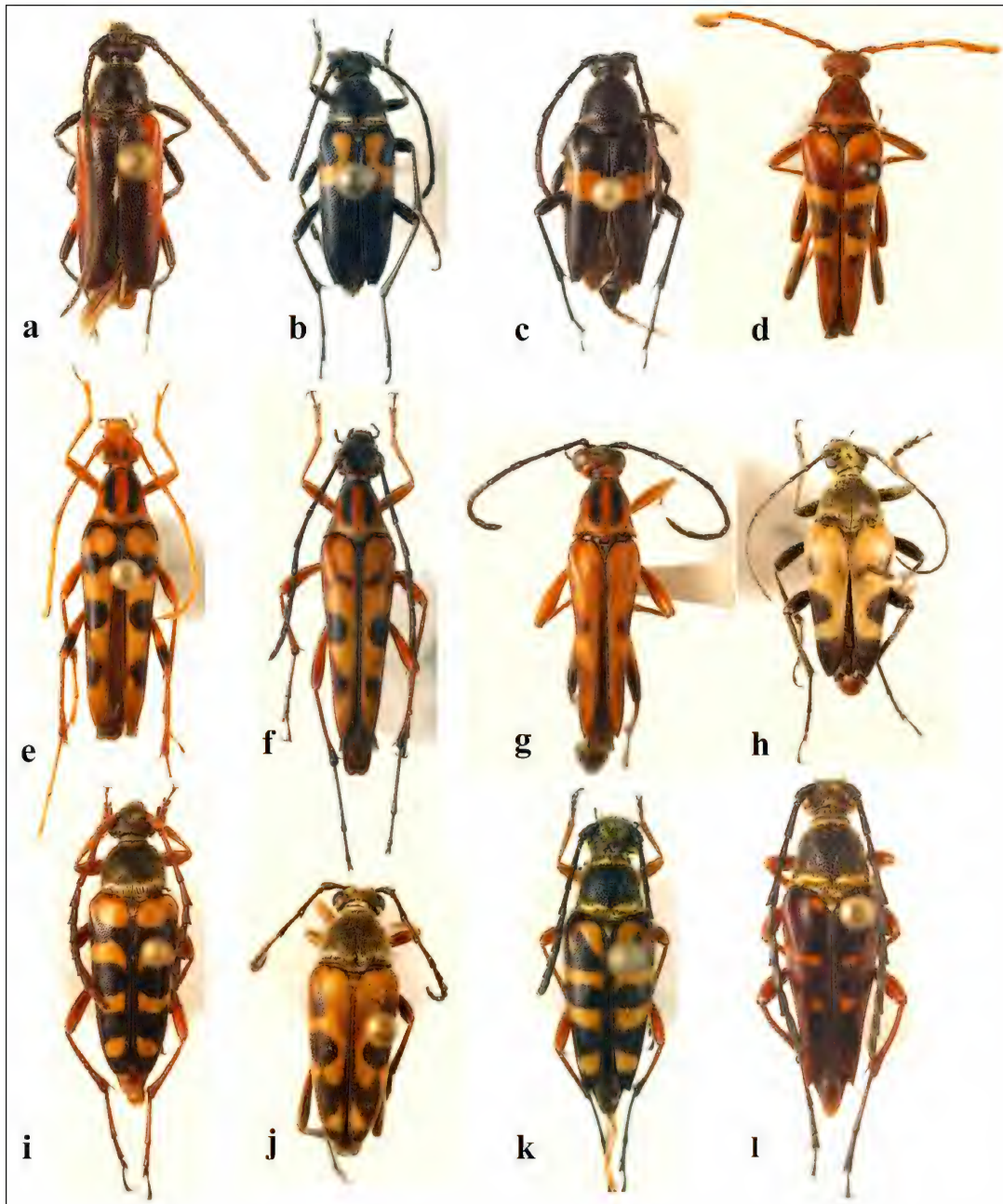
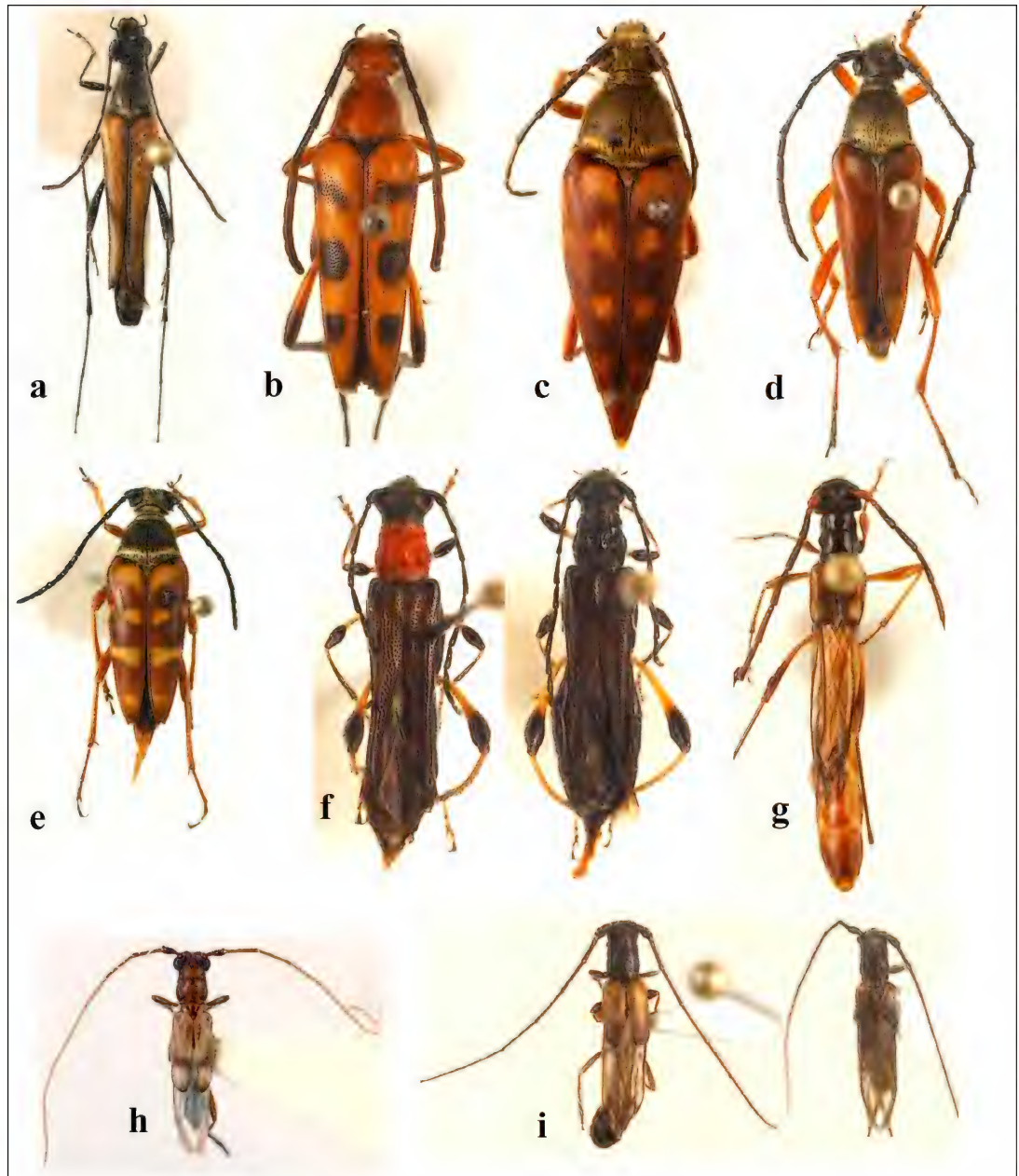


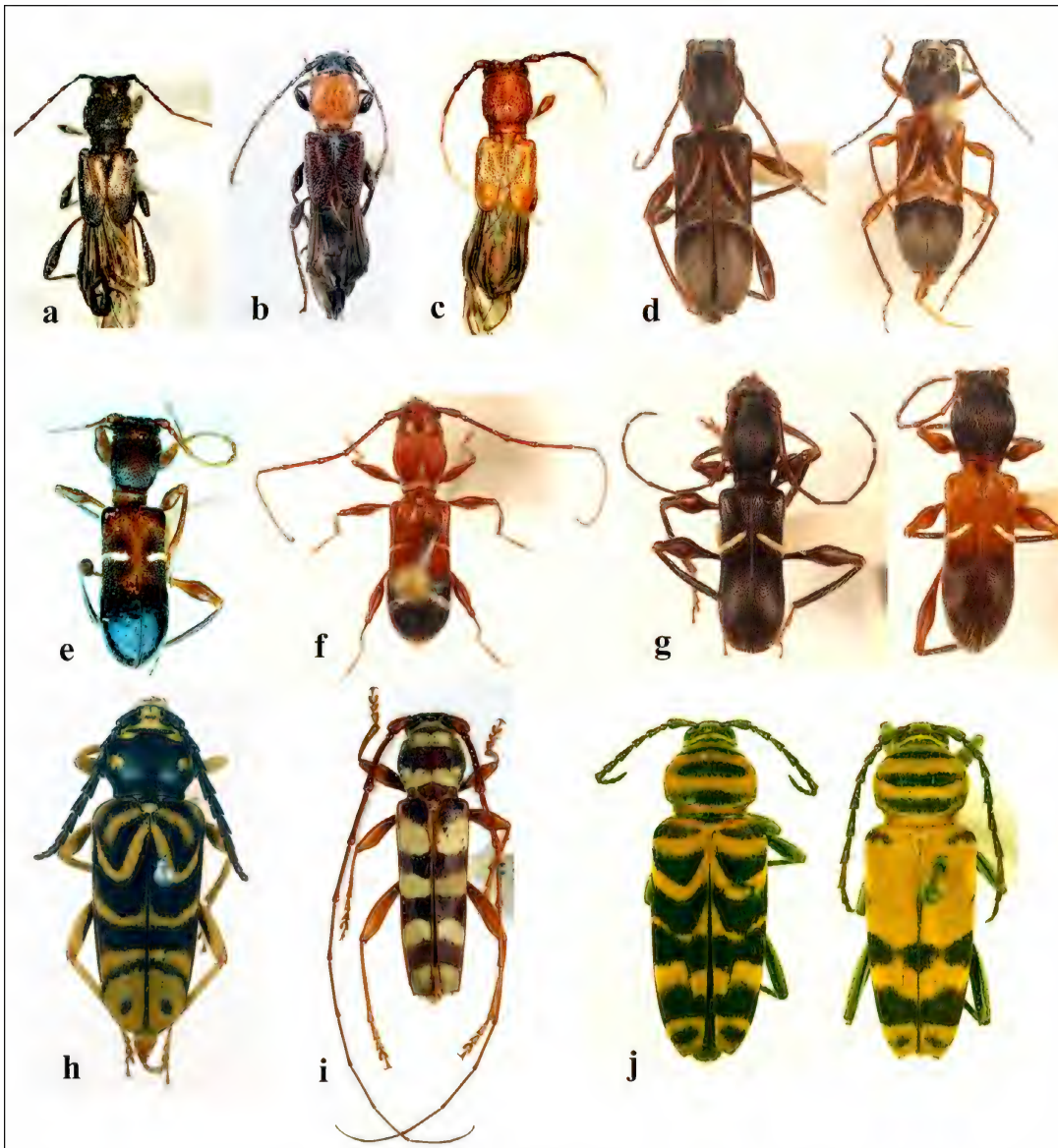
Plate 9.

**a)** *Pseudostrangalia cruentata* (Haldeman), **b)** *Typocerus lunulatus* (Swederus), **c)** *Typocerus fulvocinctus* Knull, **d)** *Strangalia strigosa* Newman, **e)** *Strangalia luteicornis* (Fabricius), **f)** *Strangalia famelica famelica* Newman, **g)** *Strangalia famelica solitaria* Haldeman, **h)** *Judolia cordifera* (Olivier), **i)** *Typocerus sinuatus* (Newman), **j)** *Typocerus octonotatus* (Haldeman), **k)** *Typocerus zebra* (Olivier), **l)** *Typocerus badius* (Newman).



**Plate 10.**

**a)** *Strangalia acuminata* (Olivier), **b)** *Strangalia sexnotata* Haldeman, **c)** *Typocerus deceptus* Knull, **d)** *Typocerus acuticauda* Casey, **e)** *Typocerus velutinus* (Olivier), **f)** *Callimoxys sanguinicollis* (Olivier), **g)** *Necydalis mellita* (Say), **h)** *Methia necydalea* (Fabricius), **i)** *Tessaropa tenuipes* (Haldeman).



**Plate 11.**

**a)** *Molorchus bimaculatus bimaculatus* Say, **b)** *Molorchus bimaculatus corni* Haldeman, **c)** *Molorchus bimaculatus semiustus* (Newman), **d)** *Cyrtophorus verrucosus* (Olivier), **e)** *Euderces reichei reichei* LeConte, **f)** *Euderces pini* (Olivier), **g)** *Euderces picipes* (Fabricius), **h)** *Glycobius speciosus* (Say), **i)** *Dryobius sexnotatus* Linsley, **j)** *Megacyllene decora* (Olivier).



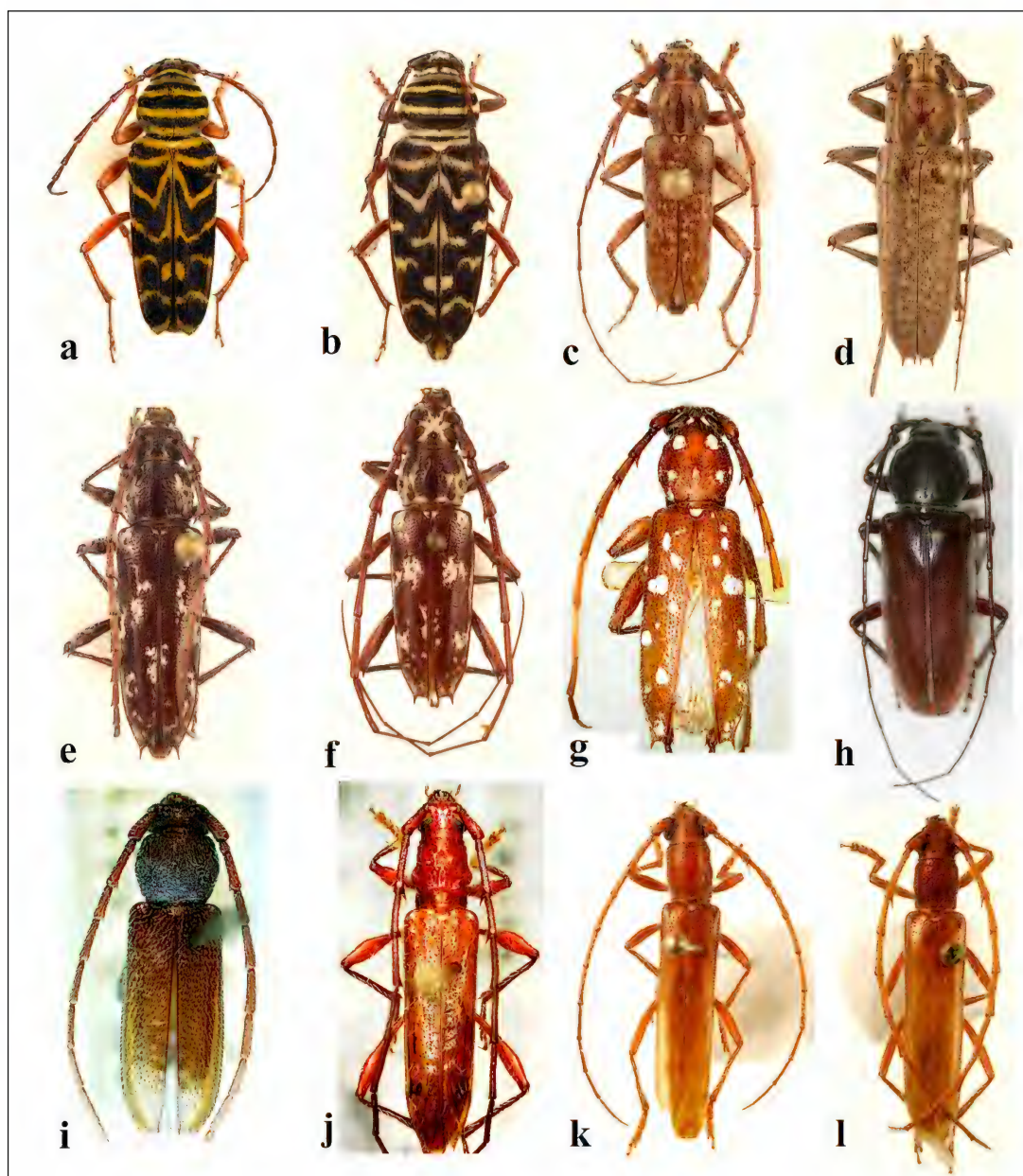
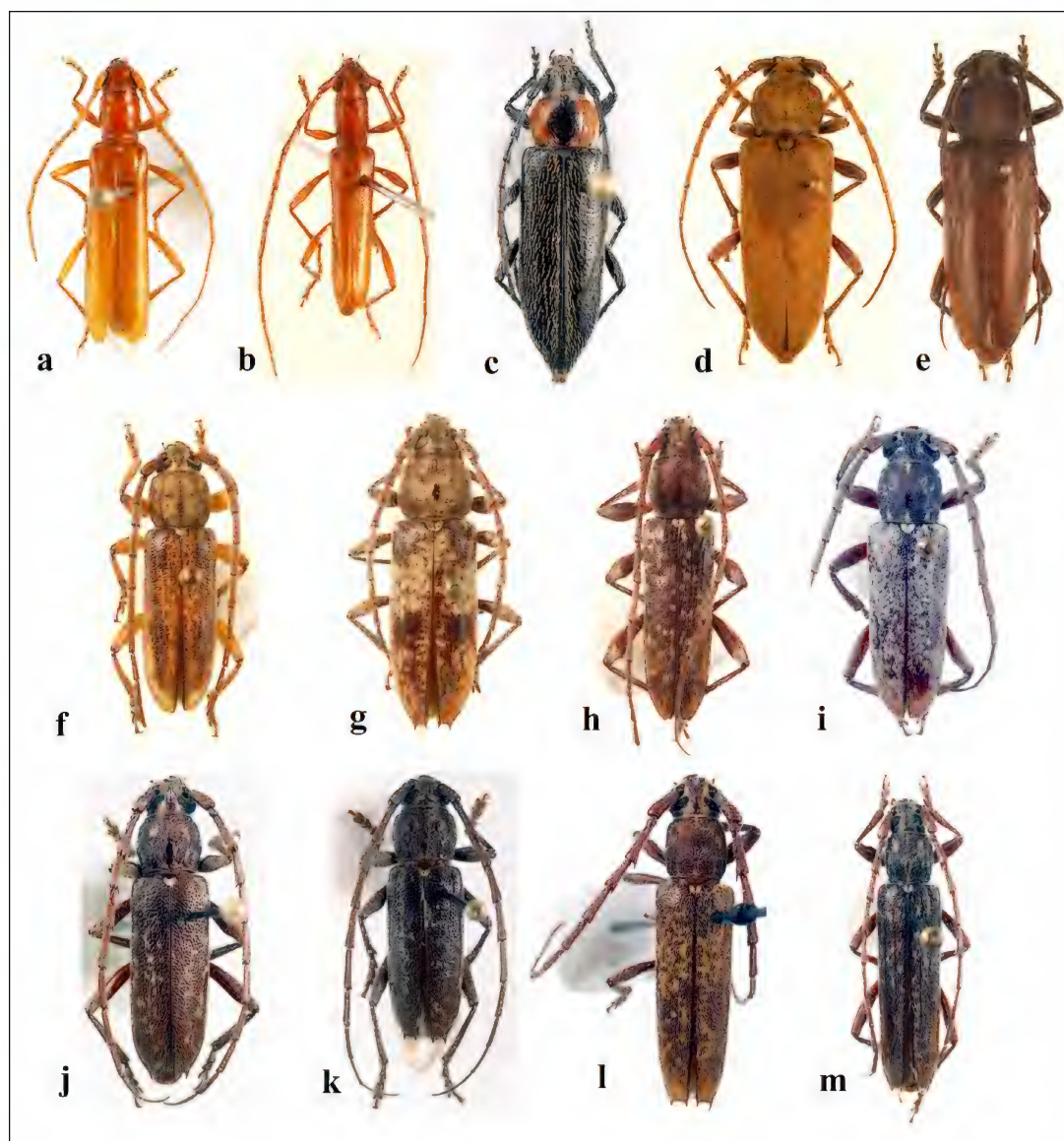


Plate 12.

**a)** *Megacyllene robiniae* (Forster), **b)** *Megacyllene caryae* (Gahan), **c)** *Elaphidion mucronatum* (Say), **d)** *Elaphidion tectum* LeConte, **e)** *Elaphidion cryptum* Linsley, **f)** *Elaphidion irroratum* (Linnaeus), **g)** *Linsleyonides albomaculatus* (Champlain & Knull), **h)** *Romulus globosus* Knull, **i)** *Anelaphus moestus* (LeConte), **j)** *Stizocera floridana* Linsley, **k)** *Aneflomorpha delongi* (Champlain & Knull), **l)** *Aneflomorpha subpubescens* (LeConte).



**Plate 13.**

**a)** *Psyrrassa unicolor* (Randall), **b)** *Psyrrassa pertenuis* (Casey), **c)** *Stenosphenus notatus* (Olivier), **d)** *Enaphalodes archboldi* Lingafelter & Chemsak, **e)** *Enaphalodes hispicornis* (Linnaeus), **f)** *Anelaphus cinereus* (Olivier), **g)** *Anelaphus mutatum* (Gahan), **h)** *Anelaphus pumilus* (Newman), **i)** *Anelaphus inermis* (Newman), **j)** *Parelaphidion incertum* (Newman), **k)** *Parelaphidion aspersum* (Haldeman), **l)** *Anelaphus villosus* (Fabricius), **m)** *Anelaphus parallelus* (Newman).



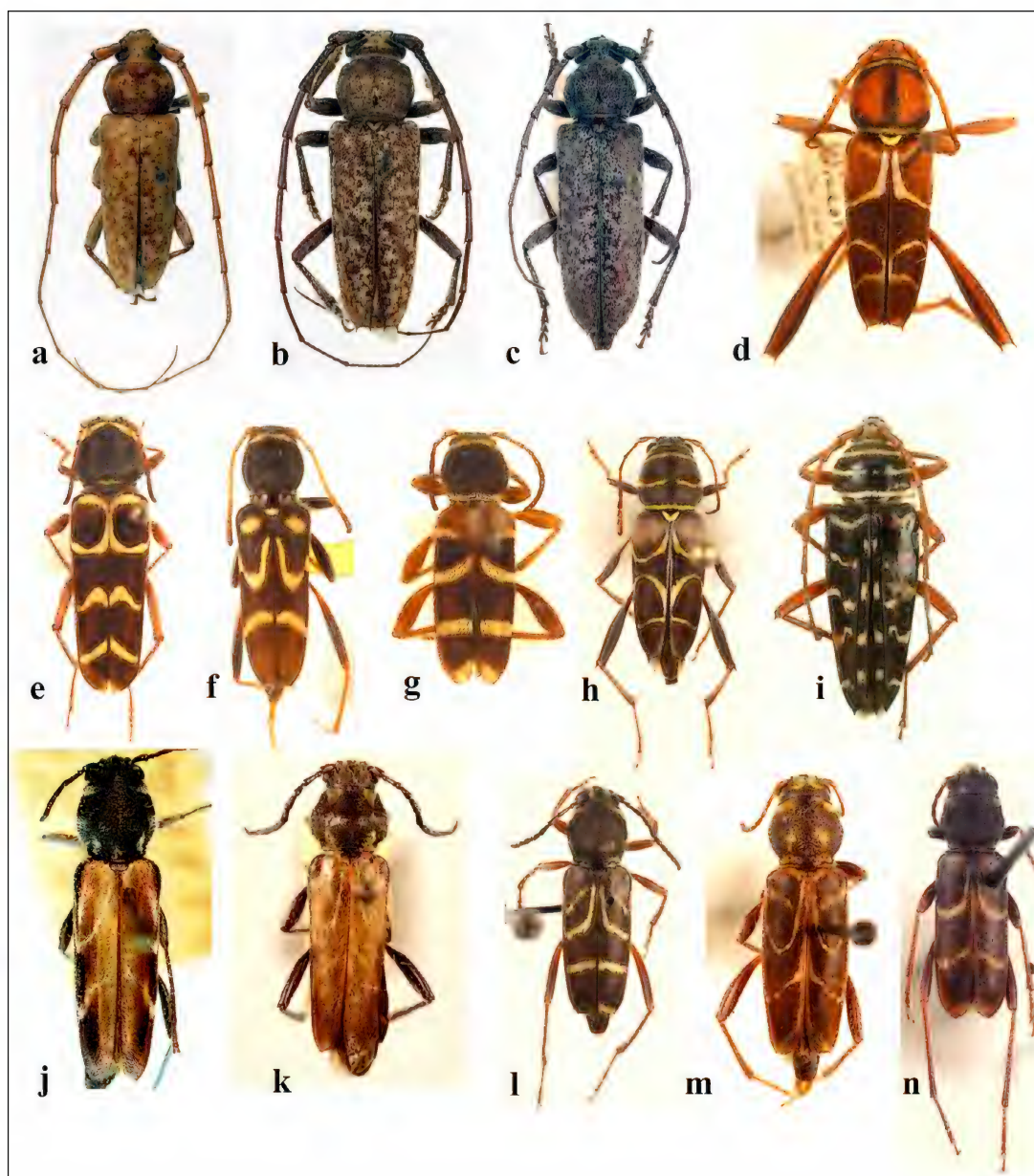
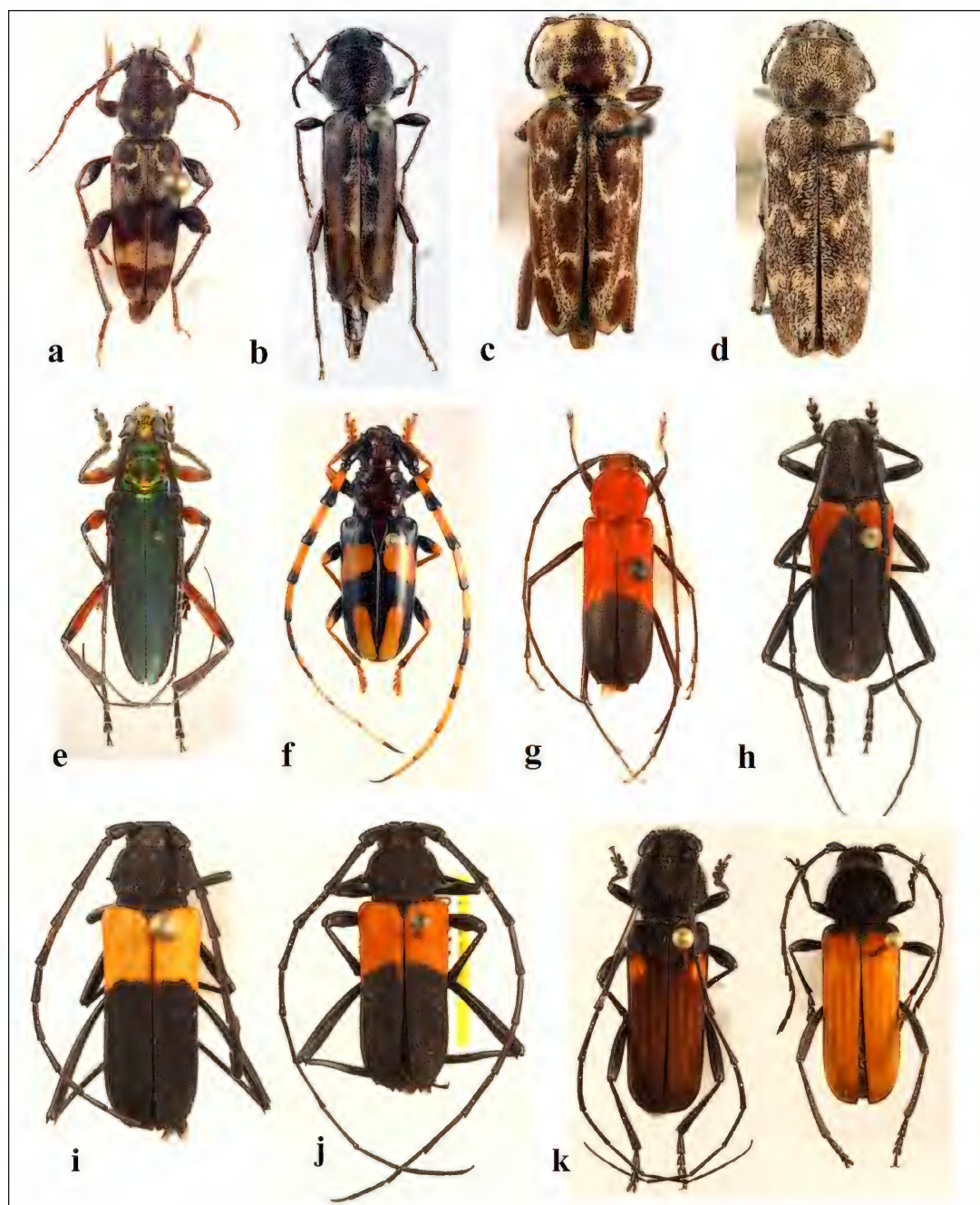


Plate 14.

**a)** *Enaphalodes rufulus* (Haldeman), **b)** *Enaphalodes atomarius* (Drury), **c)** *Enaphalodes cortiphagus* (Craighead), **d)** *Neoclytus mucronatus* (Fabricius), **e)** *Neoclytus caprea* (Say), **f)** *Clytus ruricola* (Olivier), **g)** *Clytus marginicollis* Castelnau & Gory, **h)** *Neoclytus scutellaris* (Olivier), **i)** *Placosternus difficilis* (Chevrolat), **j)** *Xylotrechus aceris* Fisher, **k)** *Xylotrechus quadrimaculatus* (Haldeman), **l)** *Xylotrechus nitidus* (Horn), **m)** *Xylotrechus convergens* LeConte, **n)** *Xylotrechus schaefferi* Schott.





**Plate 15.**

**a)** *Xylotrechus colonus* (Fabricius), **b)** *Xylotrechus sagittatus* (Germar), **c)** *Xylotrechus integer* (Haldeman), **d)** *Xylotrechus annosus annosus* (Say), **e)** *Plinthocoelium suaveolens suaveolens* (Linnaeus), **f)** *Trachyderes mandibularis* Dupont, **g)** *Heterops dimidiatus* (Chevrolat), **h)** *Purpuricenus humeralis* (Fabricius), **i)** *Purpuricenus axillaris* Haldeman, **j)** *Purpuricenus paraxillaris* MacRae, **k)** *Tragidion coquus* (Linnaeus).

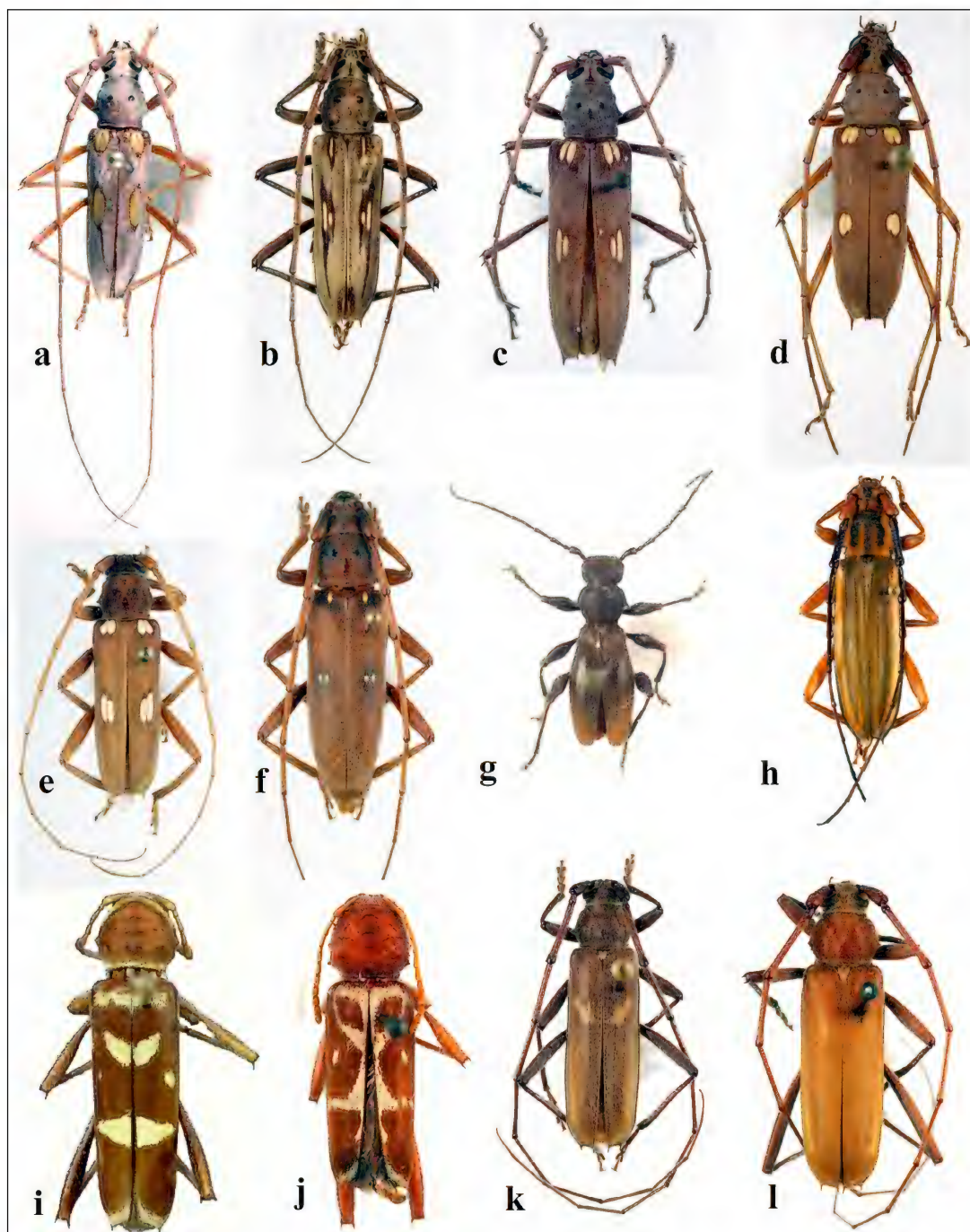
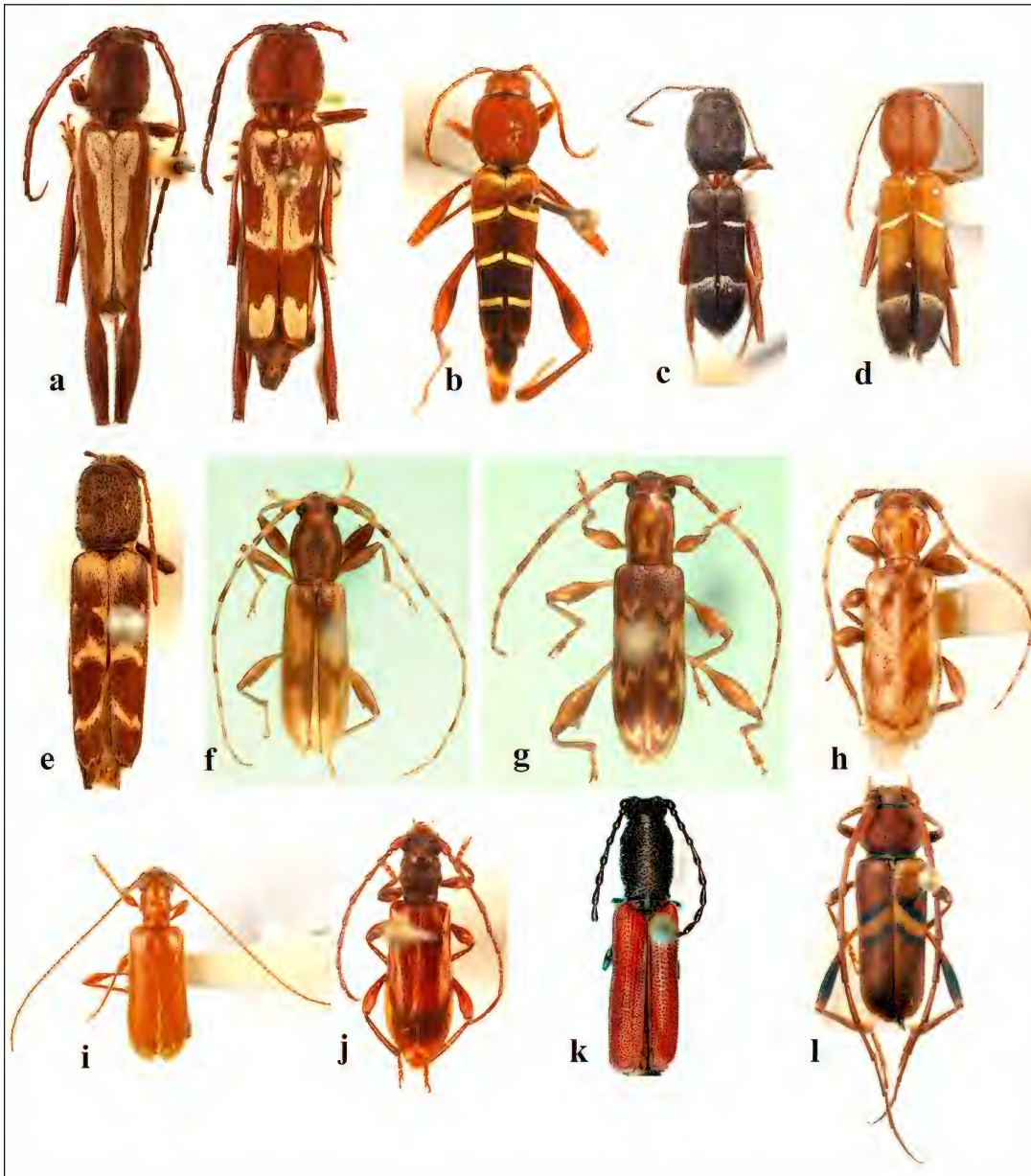


Plate 16.

**a)** *Eburia cinereopilosa* Fisher, **b)** *Eburia stigma* (Olivier), **c)** *Eburia distincta* Haldeman, **d)** *Eburia stroheckeri* Knull, **e)** *Eburia quadrigeminata* (Say), **f)** *Eburia haldemani* LeConte, **g)** *Michthisoma heterodoxum* LeConte, **h)** *Chlorida festiva* (Linnaeus), **i)** *Neoclytus longipes* (Drury), **j)** *Neoclytus cordifer* (Klug), **k)** *Knulliana cincta cincta* (Drury), **l)** *Knulliana cincta spinifera* (Fabricius).

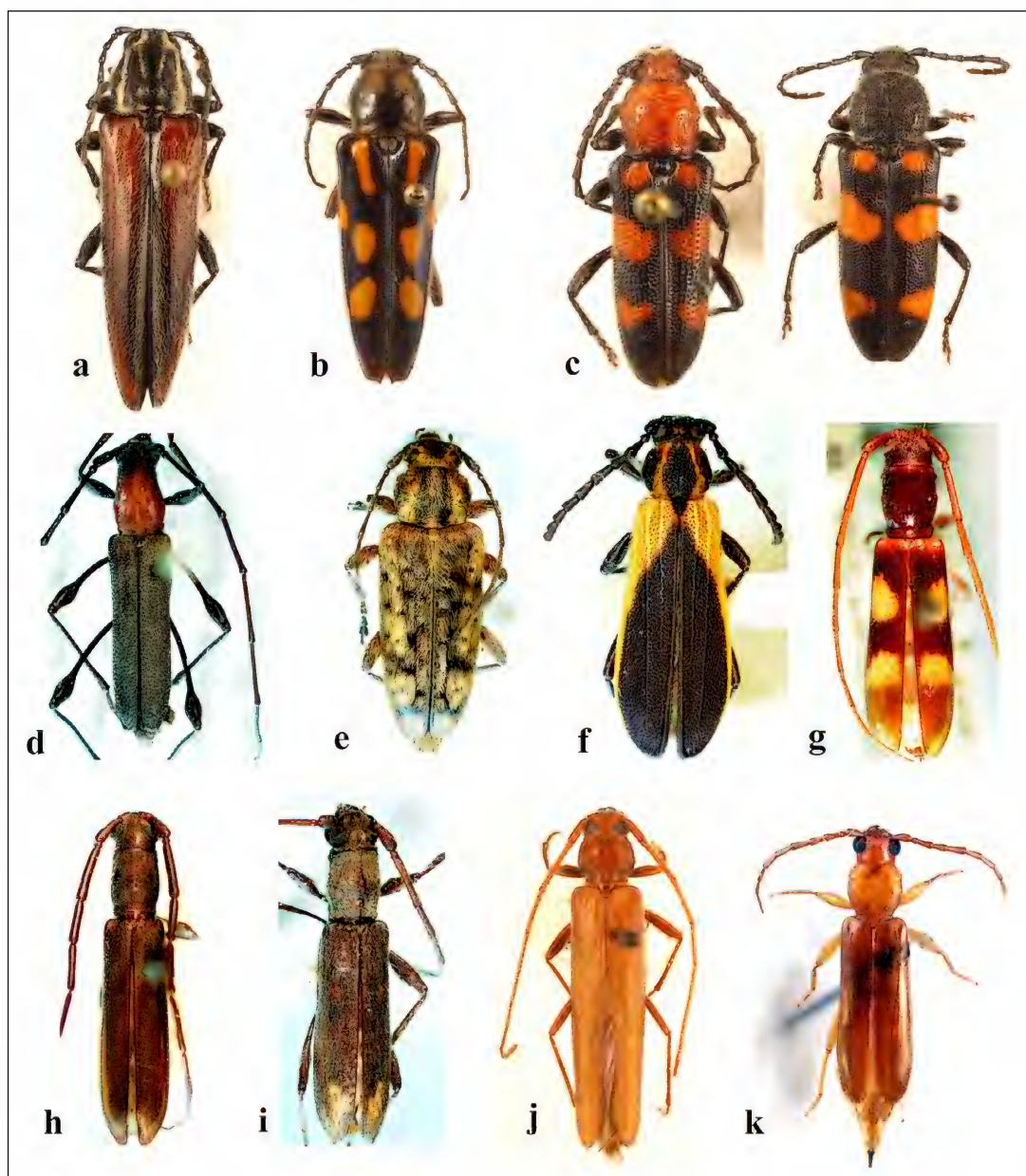




**Plate 17.**

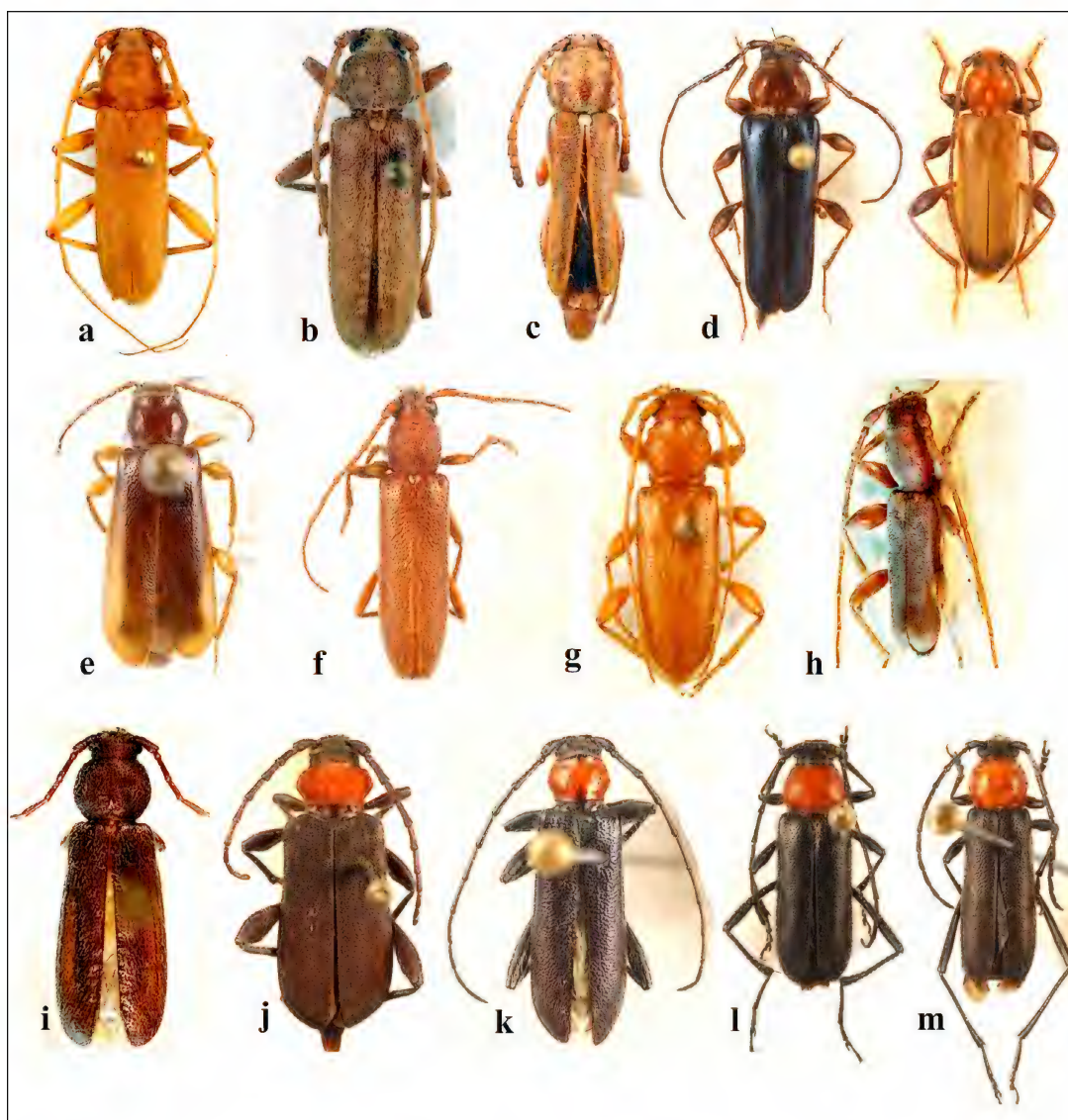
**a)** *Euryscelis suturalis* (Olivier), **b)** *Neoclytus acuminatus* (Fabricius), **c)** *Neoclytus jouteli jouteli* Davis, **d)** *Neoclytus jouteli simplarius* Blatchley, **e)** *Neoclytus horridus* (LeConte), **f)** *Curius dentatus* Newman, **g)** *Plectromerus dentipes* (Olivier), **h)** *Obrium maculatum* (Olivier), **i)** *Obrium rufulum* Gahan, **j)** *Obrium rubidum* LeConte, **k)** *Ancylocera bicolor* (Olivier), **l)** *Aethecerinus hornii* (Lacordaire).





**Plate 18.**

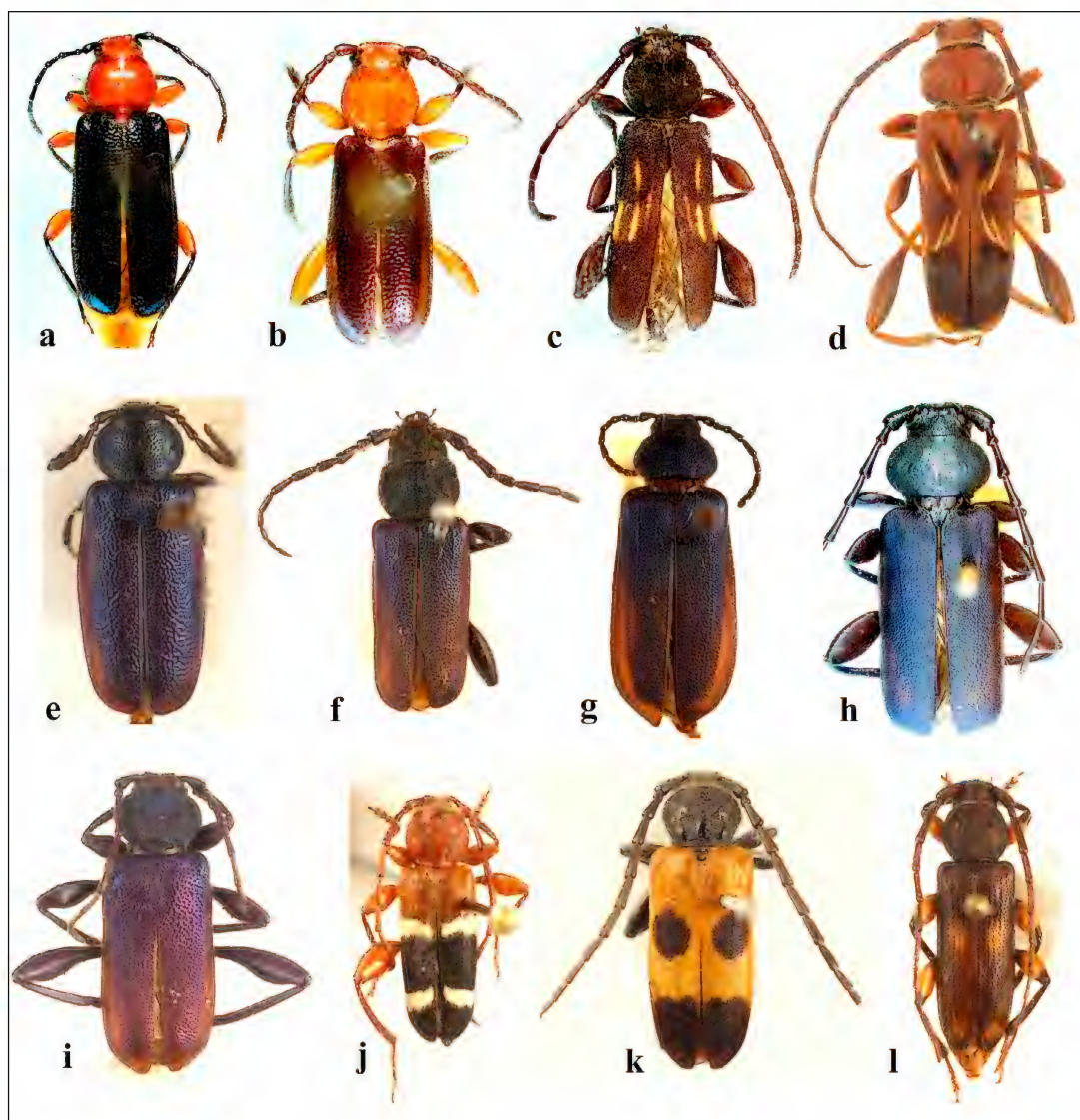
**a)** *Osmopleura chamaeropis* (Horn), **b)** *Agallissus lepturoides* (Chevrolat), **c)** *Zagymnus clerinus* (LeConte), **d)** *Rhopalophora longipes* (Say), **e)** *Atimia confusa* (Say), **f)** *Elytroleptus floridanus* (LeConte), **g)** *Heterachthes quadrimaculatus* Haldeman, **h)** *Heterachthes ebenus* Newman, **i)** *Heterachthes sablensis* Blatchley, **j)** *Oeme rigida* (Say), **k)** *Smodicum cucujiforme* (Say).



**Plate 19.**

**a)** *Stromatium fulvum* (Villers), **b)** *Hesperophanes pubescens* (Haldeman), **c)** *Plesioclytus relictus* Giesbert, **d)** *Phymatodes testaceus* (Linnaeus), **e)** *Phymatodes aereus* (Newman), **f)** *Micranoplum unicolor* (Haldeman), **g)** *Curtomerus flavus* (Fabricius), **h)** *Gracilia minuta* (Fabricius), **i)** *Tylonotus masoni* (Knull), **j)** *Ropalopus sanguinicollis* (Horn), **k)** *Pronocera collaris* (Kirby), **l)** *Batyle ignicollis* (Say), **m)** *Batyle ignicollis australis* Linsley.





**Plate 20.**

**a)** *Phymatodes amoenus* (Say), **b)** *Phymatodes lengi* Joutel, **c)** *Physocnemum brevilineum* (Say), **d)** *Physocnemum andreae* (Haldeman), **e)** *Callidium frigidum* Casey, **f)** *Callidium texanum* Schaeffer, **g)** *Callidium schotti* Schaeffer, **h)** *Callidium antennatum* Newman, **i)** *Callidium violaceum* (Linnaeus), **j)** *Phymatodes varius* (Fabricius), **k)** *Semanotus ligneus* (Fabricius), **l)** *Tylonotus bimaculatus* Haldeman.



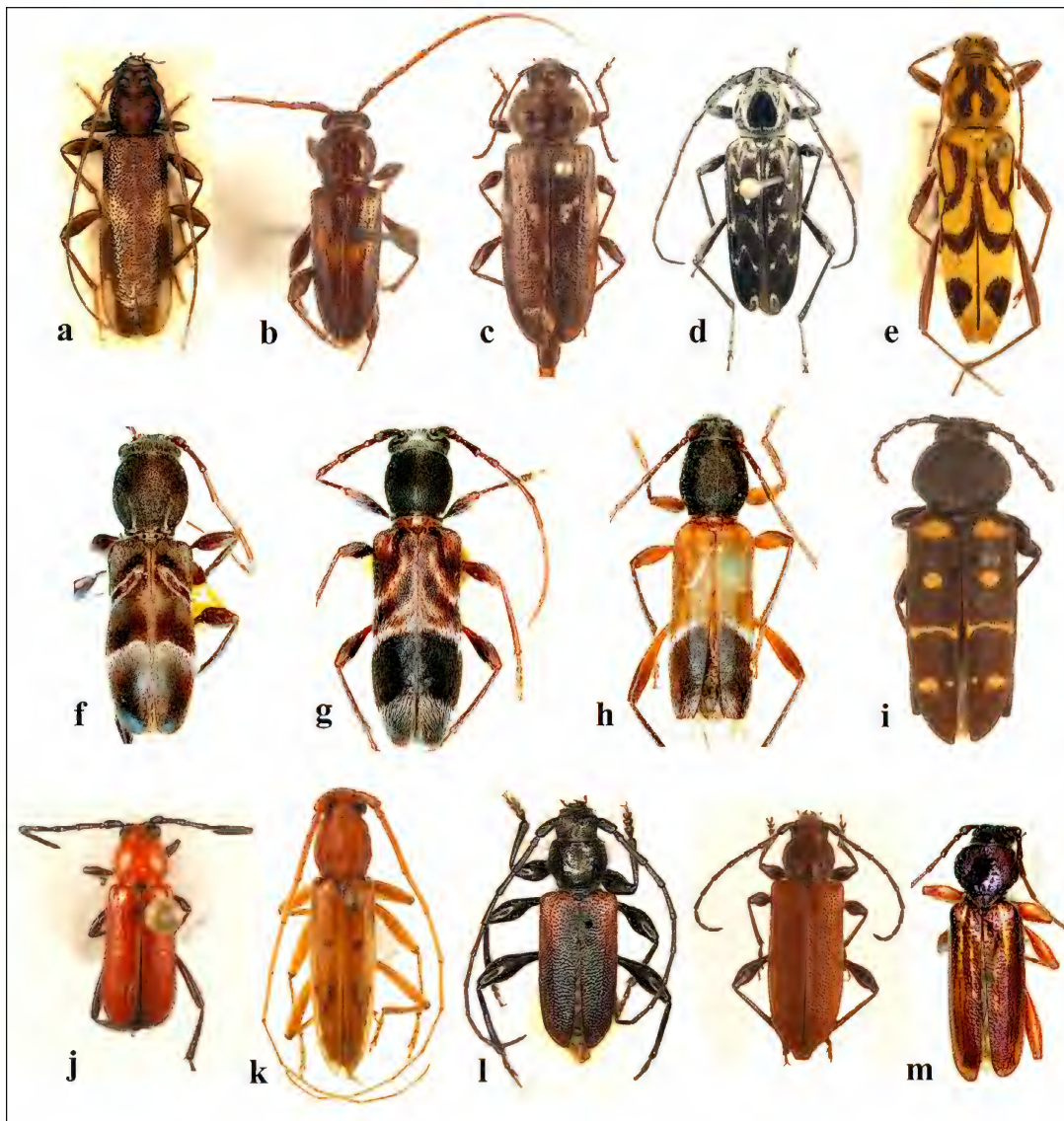
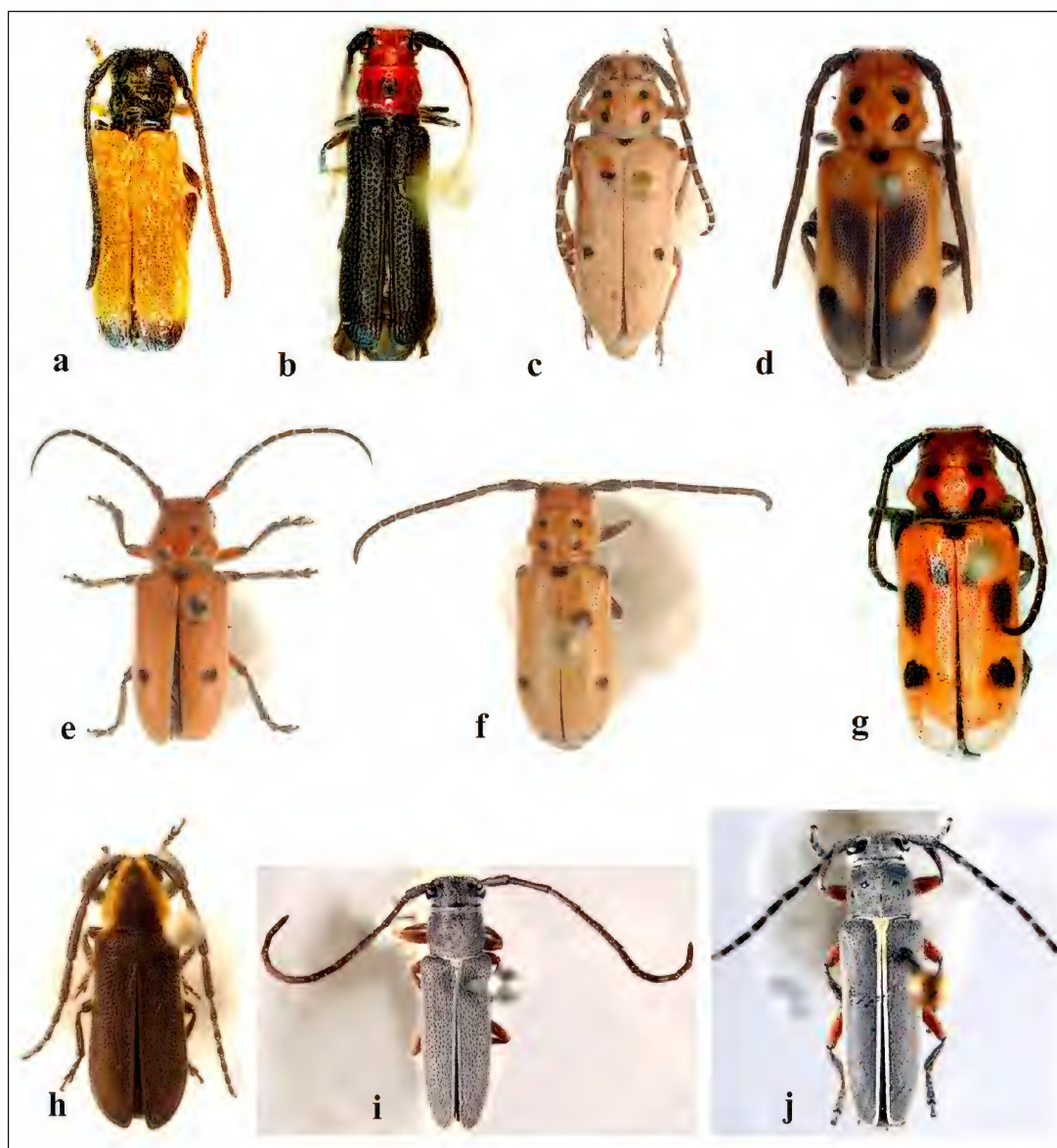


Plate 21.

**a)** *Penichroa fasciata* (Stephens), **b)** *Curtomerus fasciatus* (Fisher), **c)** *Hylotrupes bajulus* (Linnaeus), **d)** *Sarosesthes fulminans* (Fabricius), **e)** *Chlorophorus annularis* (Fabricius), **f)** *Tilloclytus geminatus* (Haldeman), **g)** *Microclytus gazellula* (Haldeman), **h)** *Clytoleptus albofasciatus* (Castelnau & Gory), **i)** *Calloides nobilis* (Harris), **j)** *Batyle suturalis* (Say), **k)** *Achryson surinamum* (Linnaeus), **l)** *Callidiellum rufipenne* (Motschulsky), **m)** *Meriellum proteus* (Kirby).



**Plate 22.**

**a)** *Tetrops praeusta* Linnaeus, **b)** *Phaea monostigma* (Haldeman), **c)** *Tetraopes pilosus* Chemsak, **d)** *Tetraopes melanurus* Schoenherr, **e)** *Tetraopes texanus* Horn, **f)** *Tetraopes quinque maculatus* Haldeman, **g)** *Tetraopes tetrophthalmus* (Forster), **h)** *Hemierana marginata* (Fabricius), **i)** *Mecas femoralis* (Haldeman), **j)** *Mecas pergrata* (Say).





**Plate 23.**

**a)** *Mecas cana cana* (Newman), **b)** *Mecas cana saturnina* LeConte, **c)** *Mecas cineracea* Casey, **d)** *Mecas marginella* LeConte, **e)** *Oberea ruficollis* (Fabricius), **f)** *Oberea gracilis* (Fabricius), **g)** *Oberea delongi* Knull, **h)** *Oberea flavipes* Haldeman, **i)** *Oberea ulmicola* Chittenden, **j)** *Oberea tripunctata* (Swederus), **k)** *Oberea praelonga* Casey, **l)** *Oberea affinis* Leng & Hamilton, **m)** *Oberea perspicillata* Haldeman.



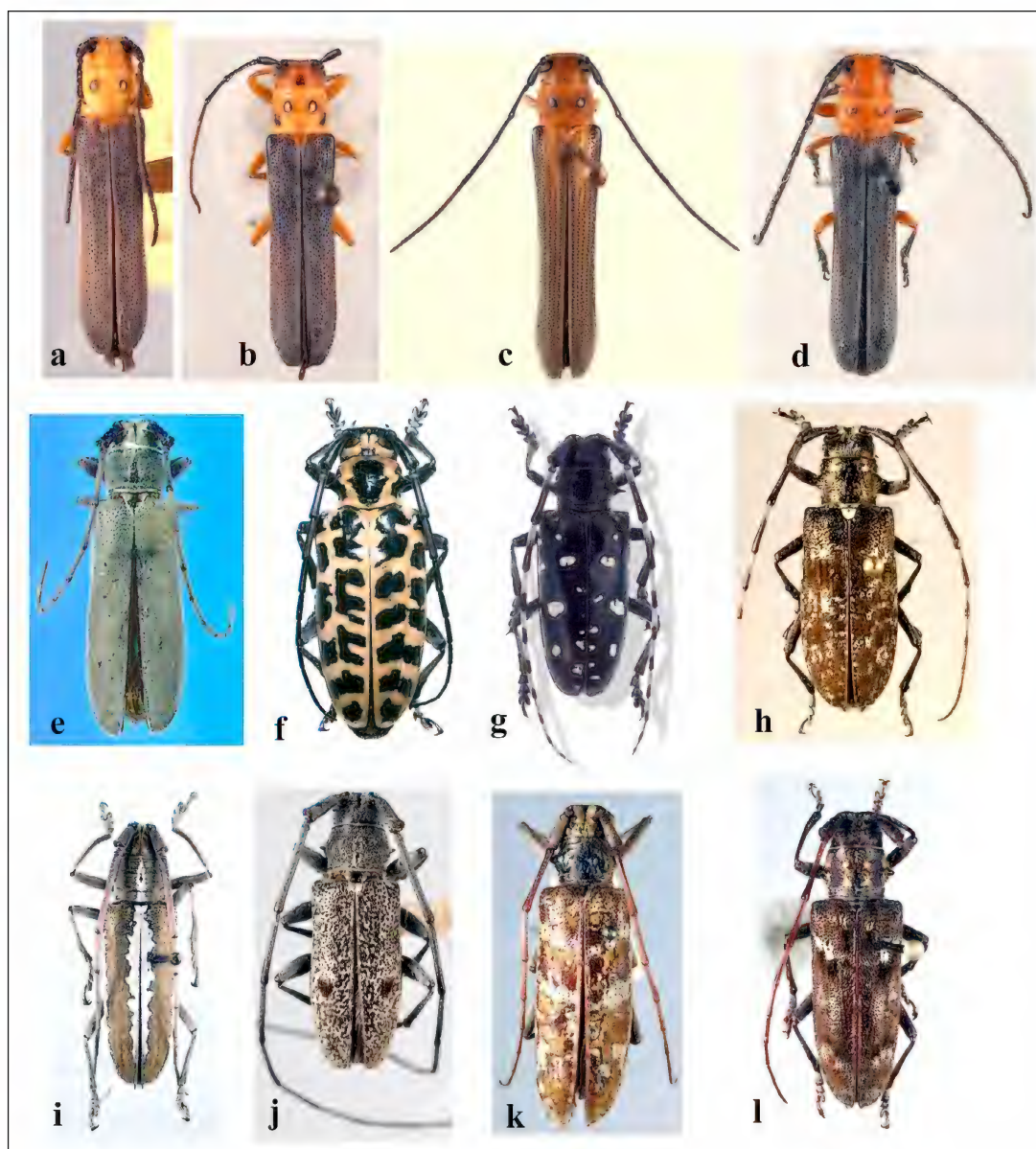


Plate 24.

**a)** *Oberea caseyi* Plavilstshikov, **b)** *Oberea schaumii* LeConte, **c)** *Oberea myops* Haldeman, **d)** *Oberea ocellata* Haldeman, **e)** *Hebestola nebulosa* Haldeman, **f)** *Plectrodera scalator* (Fabricius), **g)** *Anoplophora glabripennis* (Motschulsky), **h)** *Monochamus scutellatus* (Say), **i)** *Neoptychodes trilineatus* (Linnaeus), **j)** *Microgoes oculatus* (LeConte), **k)** *Monochamus marmorator* Kirby, **l)** *Monochamus notatus* (Drury).

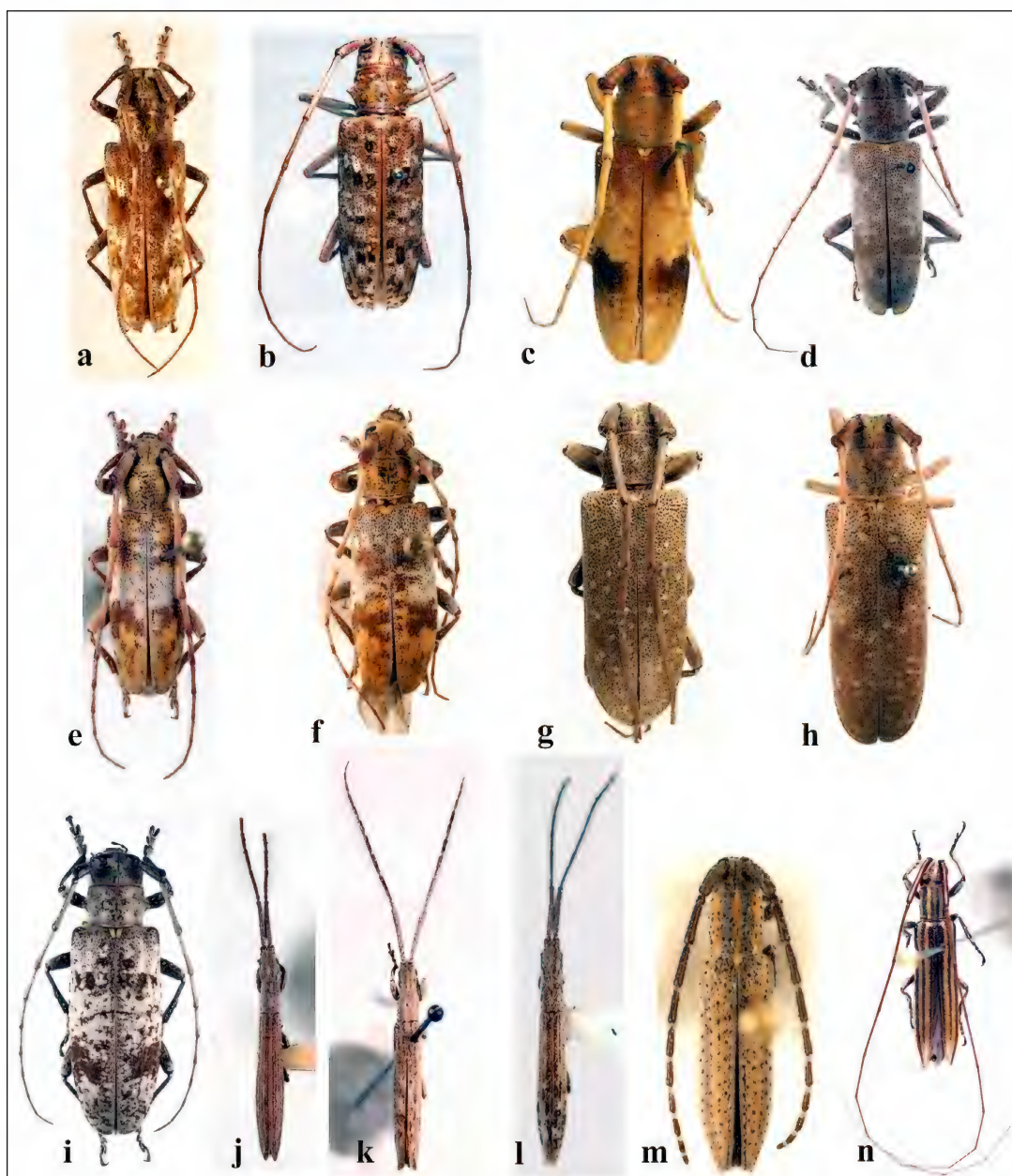
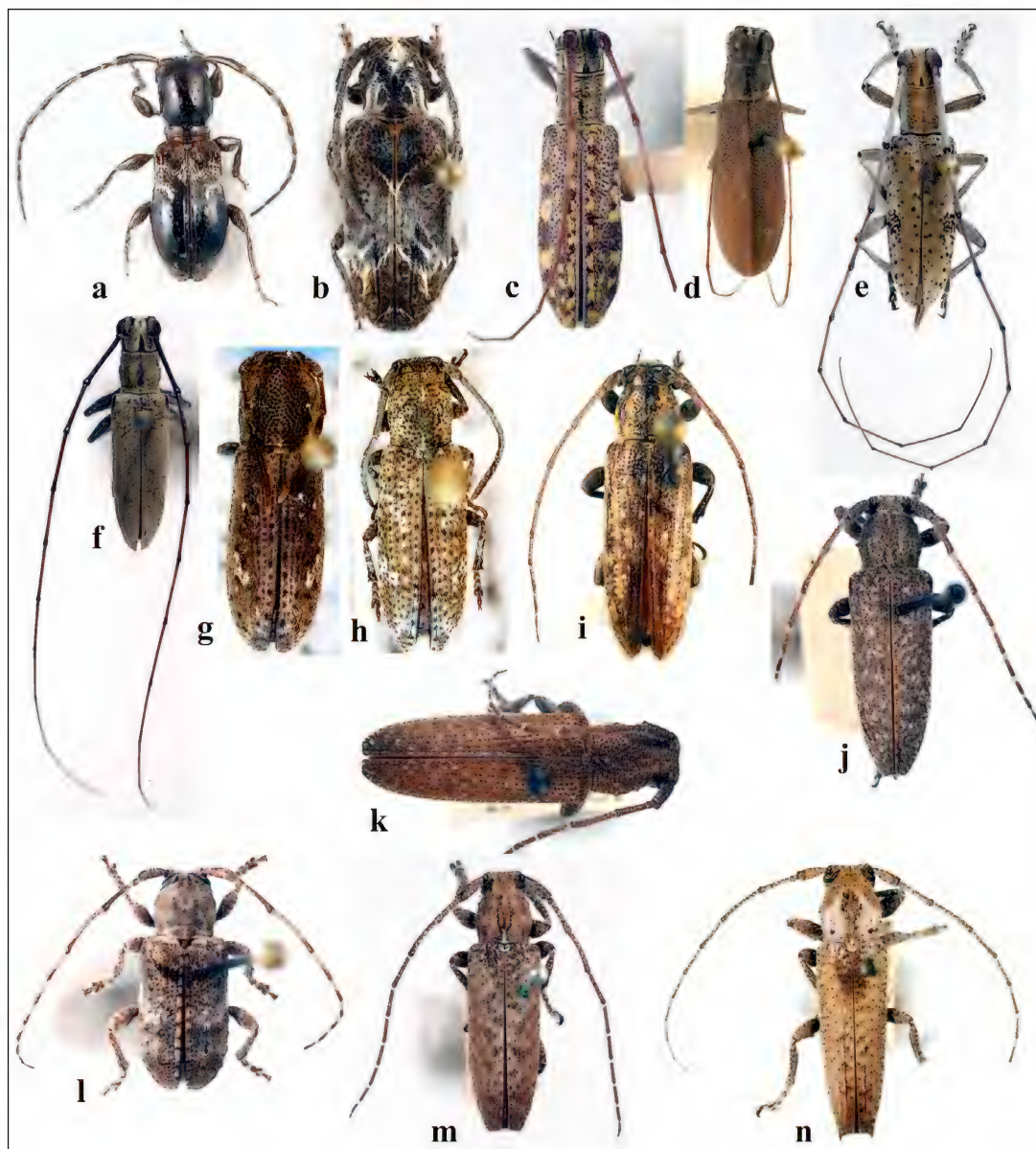


Plate 25.

**a)** *Monochamus carolinensis* (Olivier), **b)** *Monochamus titillator* (Fabricius), **c)** *Goes pulcher* (Haldeman), **d)** *Goes pulverulentus* (Haldeman), **e)** *Goes variegatus* Linsley & Chemsak, **f)** *Goes debilis* LeConte, **g)** *Goes tumifrons* Chemsak & Linsley, **h)** *Goes tessellatus* (Haldeman), **i)** *Goes tigrinus* (DeGeer), **j)** *Spalacopsis chemsaki* Tyson, **k)** *Spalacopsis filum costulatum* Casey, **l)** *Spalacopsis stolata* Newman, **m)** *Dorcasta cinerea* (Horn), **n)** *Hippopsis lemniscata* (Fabricius).





**Plate 26.**

**a)** *Cyrtinus pygmaeus* (Haldeman), **b)** *Desmiphora hirticollis* (Olivier), **c)** *Dorcaschema alternatum* (Say), **d)** *Dorcaschema nigrum* (Say), **e)** *Dorcaschema wildii* Uhler, **f)** *Dorcaschema cinereum* (Olivier), **g)** *Parmenonta thomasi* Chemsak & Linsley, **h)** *Adetus brousi* (Horn), **i)** *Sybra alternans* Wiedemann, **j)** *Ataxia hubbardi* Fisher, **k)** *Ataxia falli* Breuning, **l)** *Ecyrus dasycerus* (Say), **m)** *Ataxia crypta* (Say), **n)** *Ataxia spinicauda* Schaeffer.



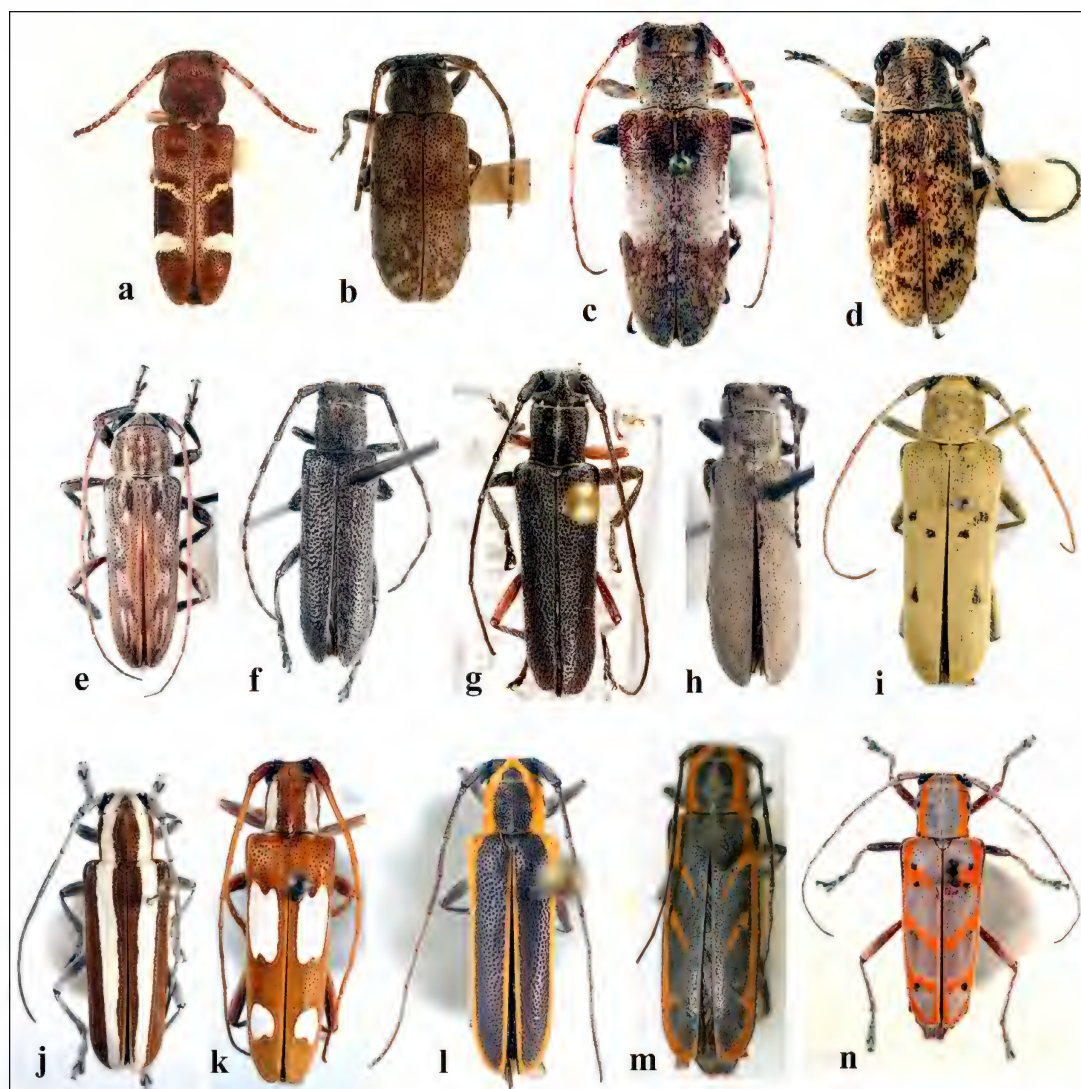
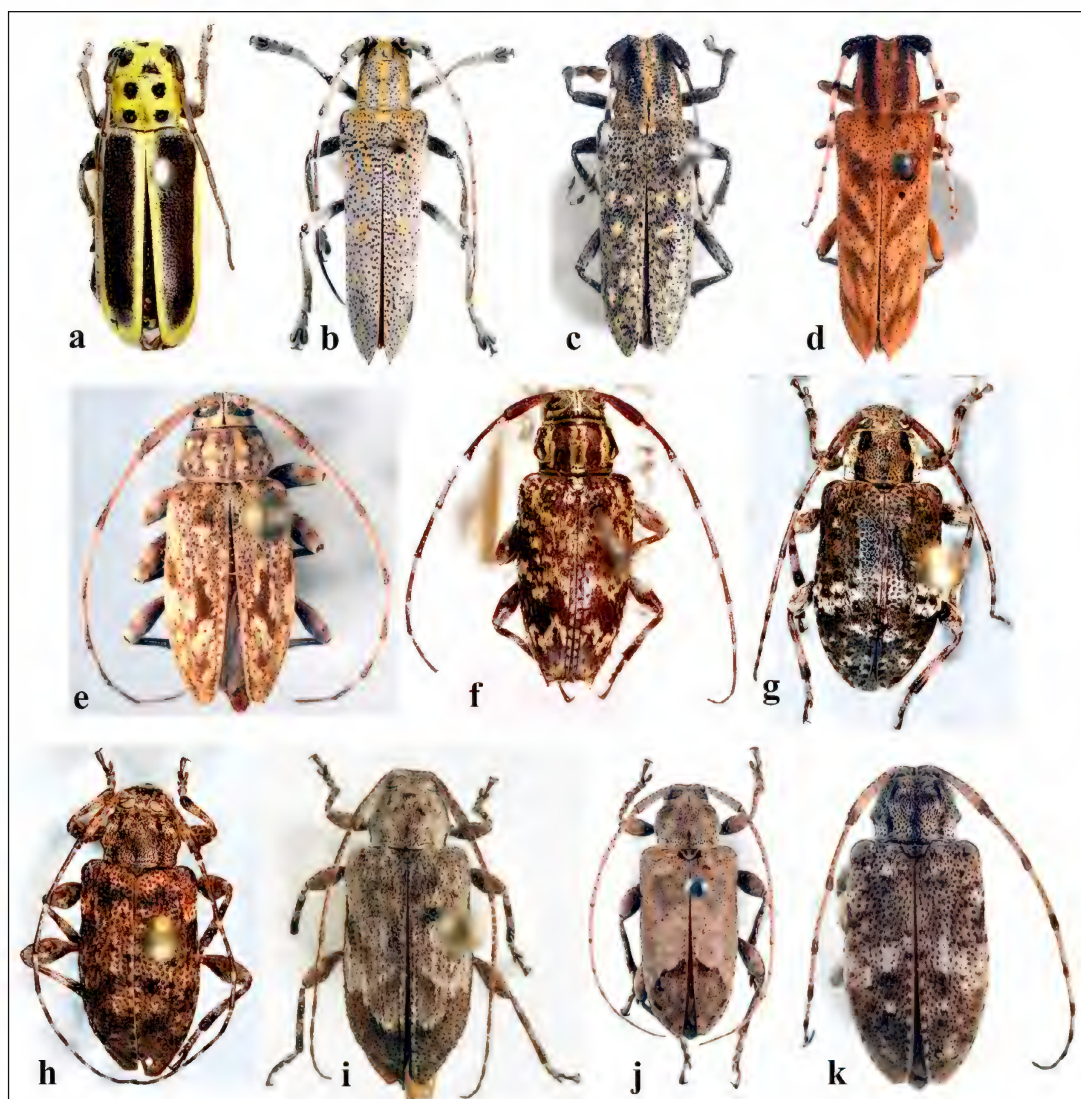


Plate 27.

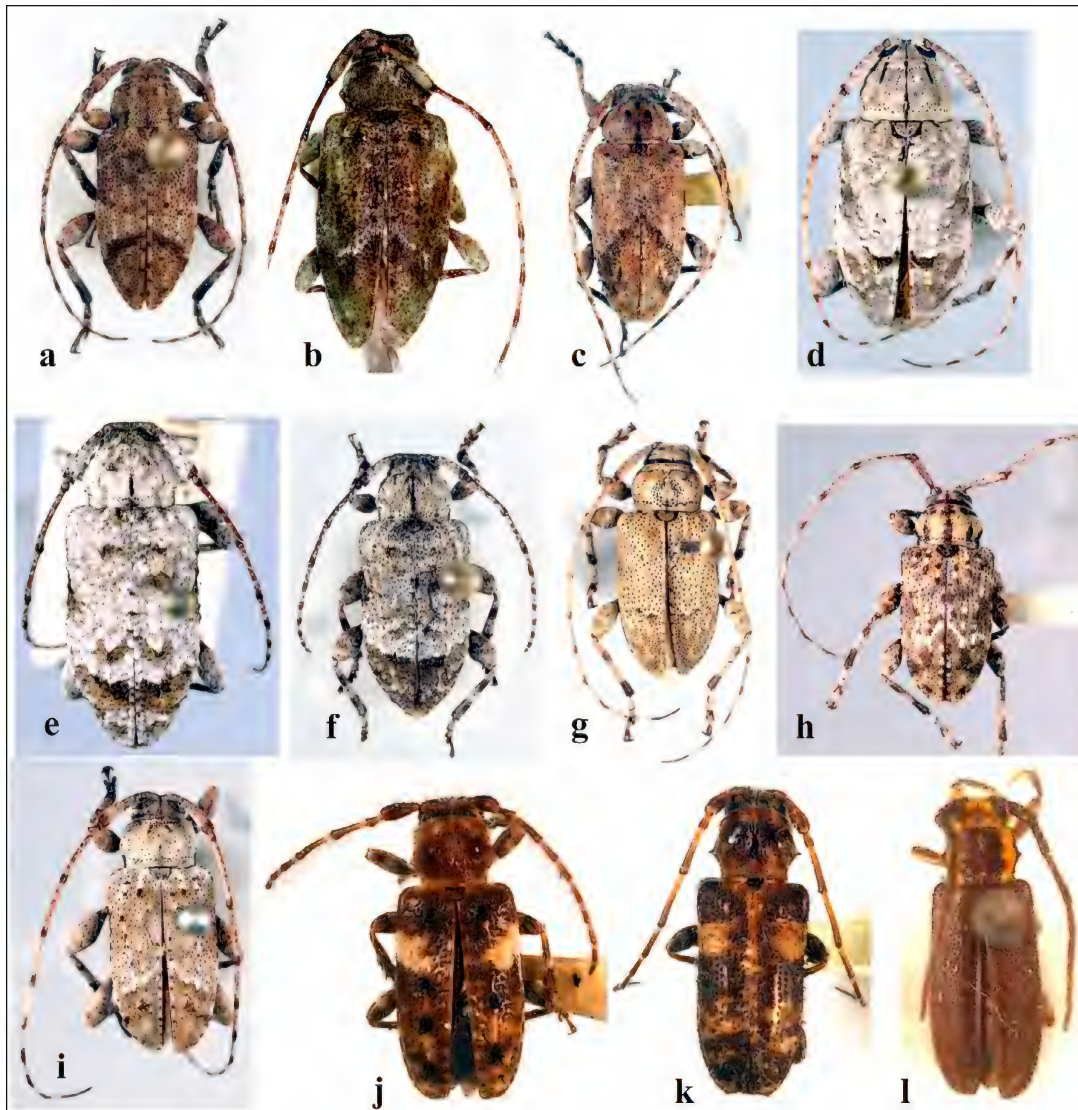
**a)** *Psenocerus supernotatus* (Say), **b)** *Zaplous annulatus* (Chevrolat), **c)** *Oncideres cingulata* (Say), **d)** *Eupogonius annulicornis* Fisher, **e)** *Lypsimena fuscata* Haldeman, **f)** *Saperda populnea moesta* LeConte, **g)** *Saperda discoidea* Fabricius, **h)** *Saperda inornata* Say, **i)** *Saperda vestita* Say, **j)** *Saperda candida* Fabricius, **k)** *Saperda crenata* Newman, **l)** *Saperda lateralis* Fabricius, **m)** *Saperda imitans* Felt & Joutel, **n)** *Saperda tridentata* Olivier.



**Plate 28.**

**a)** *Saperda puncticollis* Say, **b)** *Saperda calcarata* Say, **c)** *Saperda mutica* Say, **d)** *Saperda obliqua* Say, **e)** *Nyssodrysinia haldemani* (LeConte), **f)** *Alcidion umbraticus* (Jacquelin du Val), **g)** *Astylopsis macula* (Say), **h)** *Astylopsis sexguttata* (Say), **i)** *Astylopsis arcuatus* (LeConte), **j)** *Astylopsis perplexa* (Haldeman), **k)** *Astylopsis collaris* (Haldeman).

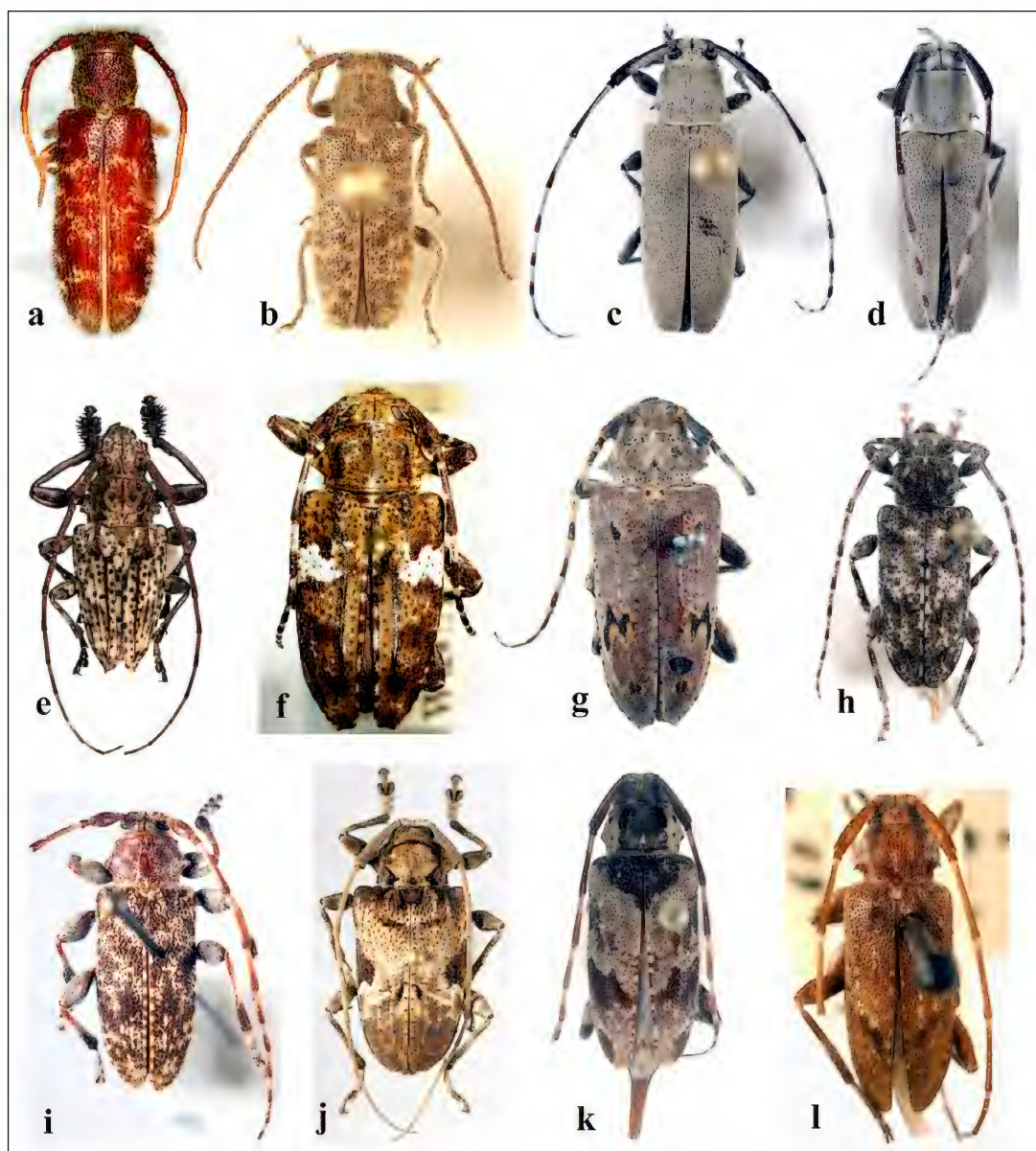




**Plate 29.**

**a)** *Astylopsis fascipennis* Schiefer, **b)** *Astylidius parvus* (LeConte), **c)** *Styloleptus biustus* (LeConte), **d)** *Leptostylopsis argentatus* (Jacquelin du Val), **e)** *Leptostylus asperatus* (Haldeman), **f)** *Leptostylus transversus* (Gyllenhal), **g)** *Leptostylopsis terraecolor* (Horn), **h)** *Leptostylopsis albofasciatus* (Fisher), **i)** *Leptostylopsis planidorsus* (LeConte), **j)** *Pogonocherus penicillatus* LeConte, **k)** *Pogonocherus mixtus* Haldeman, **l)** *Eupogonius subarmatus* (LeConte).





**Plate 30.**

**a)** *Eupogonius tomentosus* (Haldeman), **b)** *Eupogonius pauper* LeConte, **c)** *Dectes texanus* LeConte, **d)** *Dectes sayi* Dillon & Dillon, **e)** *Steirastoma breve* (Sulzer), **f)** *Aegomorphus quadrigibbus* (Say), **g)** *Aegomorphus morrisii* (Uhler), **h)** *Aegomorphus modestus* (Gyllenhal), **i)** *Oplosia nubila* (LeConte), **j)** *Lagocheirus araneiformis stroheckeri* Dillon, **k)** *Urographis triangulifer* (Haldeman), **l)** *Eutrichillus biguttatus* (LeConte).

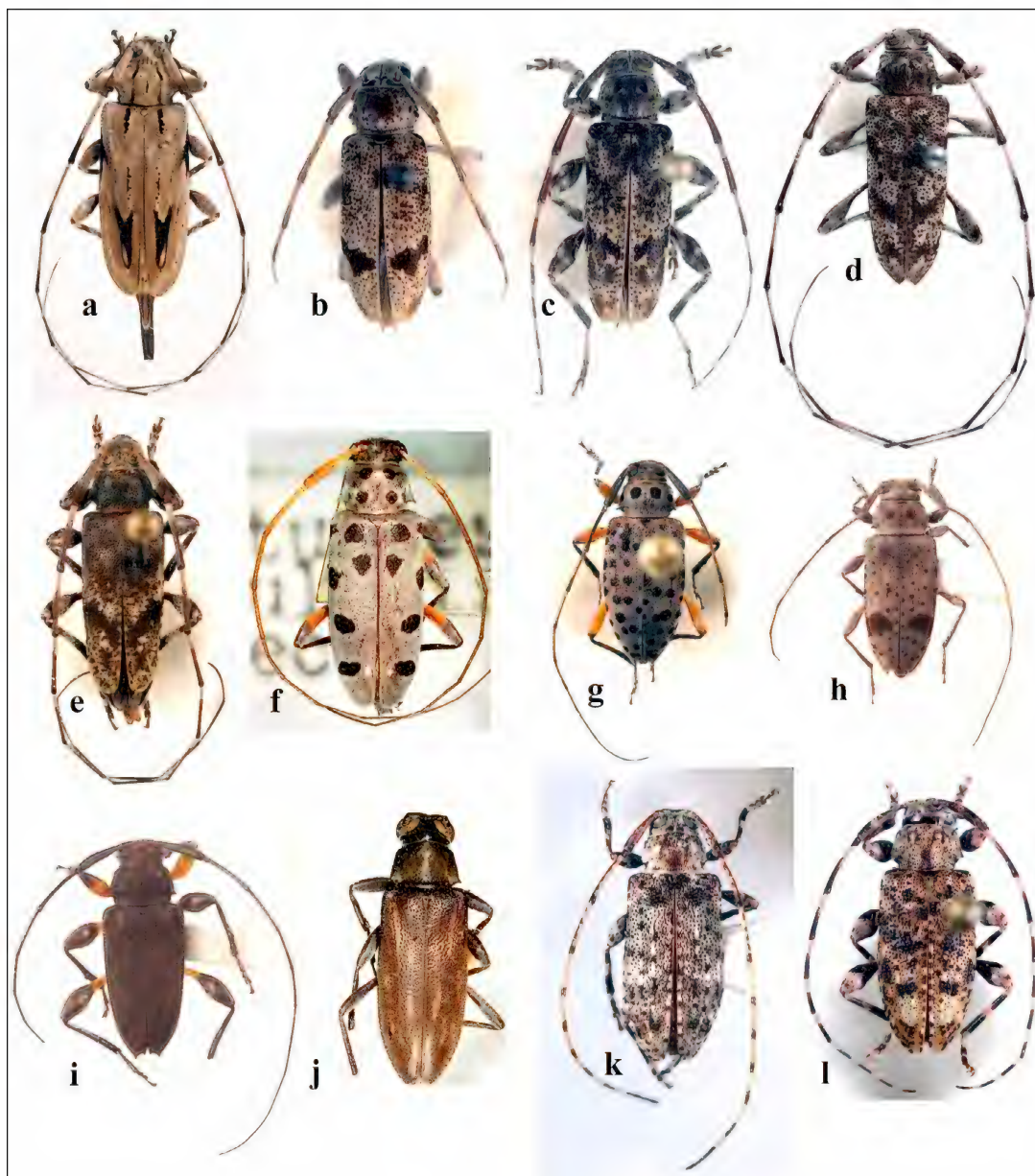
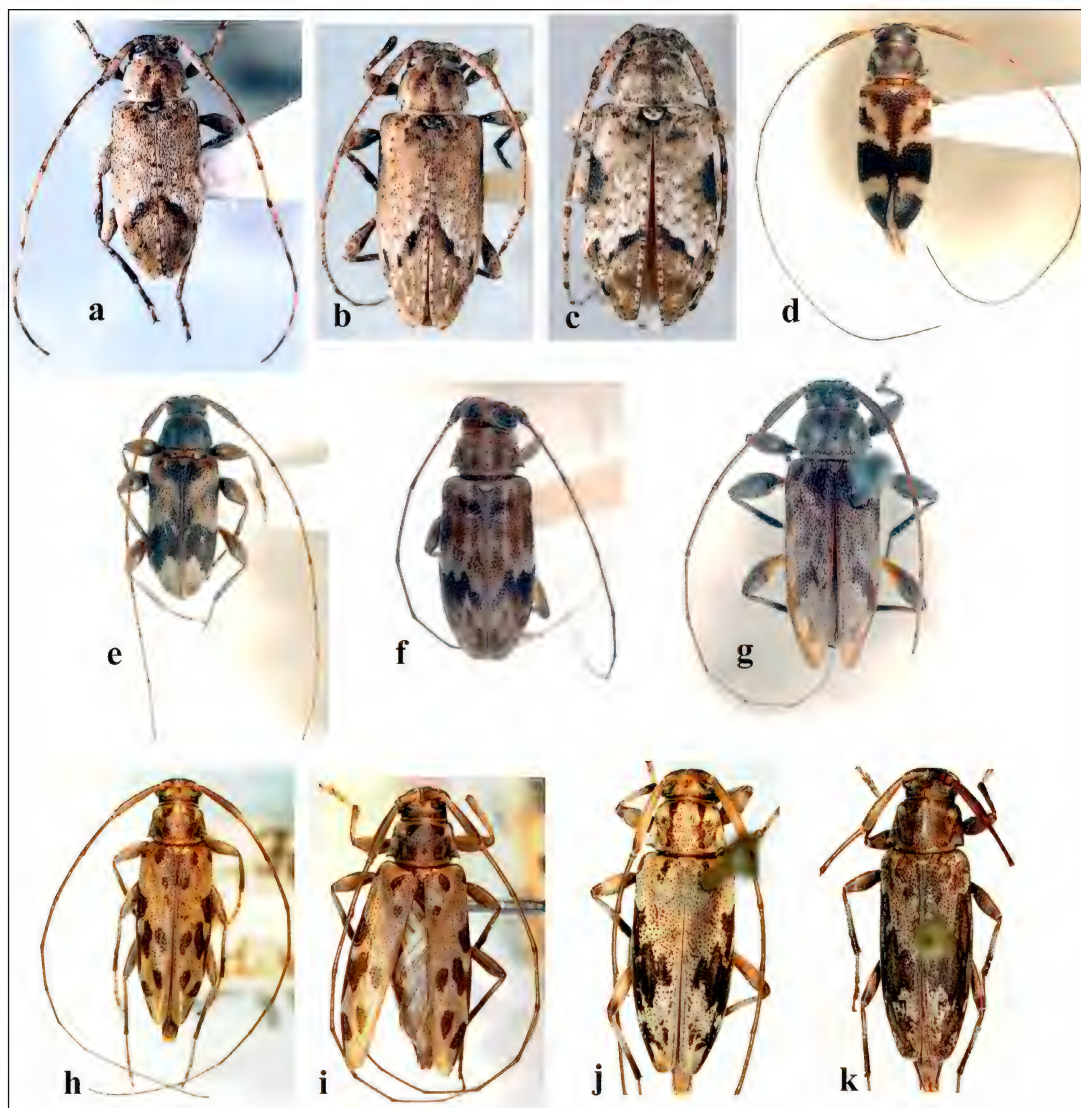


Plate 31.

**a)** *Acanthocinus nodosus* (Fabricius), **b)** *Urographis despectus* (LeConte), **c)** *Urographis fasciatus* (DeGeer), **d)** *Acanthocinus obsoletus* (Olivier), **e)** *Acanthocinus pusillus* Kirby, **f)** *Lepturges regularis* (LeConte), **g)** *Hyperplatys aspersa* (Say), **h)** *Hyperplatys maculata* Haldeman, **i)** *Hyperplatys femoralis* Haldeman, **j)** *Lepturges megalops* Hamilton, **k)** *Liopinus punctatus* (Haldeman), **l)** *Sternidius variegatus* (Haldeman).





**Plate 32.**

**a)** *Liopinus misellus* (LeConte), **b)** *Liopinus alpha* (Say), **c)** *Liopinus mimeticus* (Casey), **d)** *Urgleptes facetus* (Say), **e)** *Urgleptes querci* (Fitch), **f)** *Urgleptes foveatocollis* (Hamilton), **g)** *Urgleptes signatus* (LeConte), **h)** *Lepturges symmetricus* (Haldeman), **i)** *Lepturges pictus* (LeConte), **j)** *Lepturges angulatus* (LeConte), **k)** *Lepturges confluens* (Haldeman).



## Appendix 1.

### Scientific and Common Names of Host Plants

(authorship and common names from the USDA NRCS PLANTS database [USDA NRCS 2007])

|                                                                    |                                                                                             |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <i>Abies</i> P. Mill. (fir)                                        | <i>Carya cordiformis</i> (Wangenh.) K. Koch (bitternut hickory)                             |
| <i>Abies balsamea</i> (L.) P. Mill. (balsam fir)                   | <i>Carya floridana</i> Sarg. (scrub hickory)                                                |
| <i>Abies fraseri</i> (Pursh) Poir. (Fraser fir)                    | <i>Carya glabra</i> (P. Mill.) Sweet (pignut hickory)                                       |
| <i>Acacia farnesiana</i> (L.) Willd. (sweet acacia; huisache)      | <i>Carya illinoensis</i> (Wangenh.) K. Koch (pecan)                                         |
| <i>Acer</i> L. (maple)                                             | <i>Carya laciniata</i> (Michx. f.) G. Don (shellbark hickory)                               |
| <i>Acer negundo</i> L. (boxelder)                                  | <i>Carya ovata</i> (P. Mill.) K. Koch (shagbark hickory)                                    |
| <i>Acer pseudoplatanus</i> L. (sycamore maple)                     | <i>Castanea</i> P. Mill. (chestnut)                                                         |
| <i>Acer saccharum</i> Marsh. (sugar maple)                         | <i>Castanea dentata</i> (American chestnut)                                                 |
| <i>Acer spicatum</i> Lam. (mountain maple)                         | <i>Casuarina equisetifolia</i> L. (beach sheoak)                                            |
| <i>Achillea</i> L. (yarrow)                                        | <i>Ceanothus</i> L. (New Jersey Tea)                                                        |
| <i>Adansonia digitata</i> L. (baobab)                              | <i>Ceanothus americanus</i> (New Jersey tea)                                                |
| <i>Aesculus</i> L. (buckeye)                                       | <i>Cecropia</i> Loebl. (pumpwood)                                                           |
| <i>Aesculus glabra</i> Willd. (Ohio buckeye)                       | <i>Celtis</i> L. (hackberry)                                                                |
| <i>Aesculus pavia</i> L. (red buckeye)                             | <i>Celtis laevigata</i> Willd. (sugarberry)                                                 |
| <i>Agropyron</i> Gaertn. (wheatgrass)                              | <i>Celtis laevigata</i> Willd. var. <i>reticulata</i> (Torr.) L. Benson (netleaf hackberry) |
| <i>Albizia</i> Durazz. (albizia)                                   | <i>Celtis occidentalis</i> L. (common hackberry)                                            |
| <i>Alnus</i> P. Mill. (alder)                                      | <i>Celtis tenuifolia</i> Nutt. (dwarf hackberry)                                            |
| <i>Amelanchier arborea</i> (Michx. f.) Fern. (common serviceberry) | <i>Cercis canadensis</i> L. (eastern redbud)                                                |
| <i>Ambrosia</i> L. (ragweed)                                       | <i>Chamaecyparis</i> Spach (cedar)                                                          |
| <i>Ambrosia artemisiifolia</i> L. (annual ragweed)                 | <i>Chenopodium botrys</i> (Jerusalem oak)                                                   |
| <i>Amorpha fruticosa</i> L. (desert false indigo)                  | <i>Cirsium</i> P. Mill. (thistle)                                                           |
| <i>Ampelopsis arborea</i> (L.) Koehne (peppervine)                 | <i>Citrus</i> L. (citrus)                                                                   |
| <i>Andropogon</i> L. (bluestem)                                    | <i>Coccoloba diversifolia</i> Jacq. (tietongue)                                             |
| <i>Apocynum</i> L. (dogbane)                                       | <i>Cocos nucifera</i> L. (coconut palm)                                                     |
| <i>Aruncus</i> L. (aruncus)                                        | <i>Cojoba arborea</i> (L.) Britt. & Rose (wild tamarind)                                    |
| <i>Aruncus dioicus</i> (Walt.) Fern. (bride's feathers)            | <i>Conocarpus erectus</i> L. (button mangrove)                                              |
| <i>Asclepias amplexicaulis</i> Sm. (clasping milkweed)             | <i>Cordia</i> L. (cordia)                                                                   |
| <i>Asclepias arenaria</i> Torr. (sand milkweed)                    | <i>Coreopsis</i> L. (tickseed)                                                              |
| <i>Asclepias hirtella</i> (Pennell) Woods. (green milkweed)        | <i>Cornus</i> L. (dogwood)                                                                  |
| <i>Asclepias syriaca</i> L. (common milkweed)                      | <i>Cornus asperifolia</i> Michx. (toughleaf dogwood)                                        |
| <i>Asclepias tuberosa</i> L. (butterfly milkweed)                  | <i>Cornus florida</i> L. (flowering dogwood)                                                |
| <i>Asparagus</i> L. (asparagus)                                    | <i>Corylopsis</i> Sieb. & Zucc. (winter hazel)                                              |
| <i>Arctium</i> L. (burdock)                                        | <i>Crataegus</i> L. (hawthorn)                                                              |
| <i>Aster</i> L. (aster)                                            | <i>Crataegus viridis</i> L. (green hawthorn)                                                |
| <i>Avicennia germinans</i> (L.) L. (black mangrove)                | <i>Crossopetalum rhacoma</i> Crantz (maidenberry)                                           |
| <i>Baccharis halimifolia</i> L. (eastern baccharis)                | <i>Croton capitatus</i> Michx. (hogwort)                                                    |
| <i>Bambusa</i> Schreb. (bamboo)                                    | <i>Cryptomeria japonica</i> (L. f.) D. Don (Japanese cedar)                                 |
| <i>Batis maritima</i> L. (turtleweed)                              | <i>Cupressus</i> L. (cypress)                                                               |
| <i>Betula</i> L. (birch)                                           | <i>Cucurbita</i> L. (gourd)                                                                 |
| <i>Betula nigra</i> L. (river birch)                               | <i>Cydonia oblonga</i> P. Mill. (quince)                                                    |
| <i>Bombax ceiba</i> L. (red silk cotton tree)                      | <i>Daucus carota</i> L. (Queen Anne's lace)                                                 |
| <i>Bursera simaruba</i> (L.) Sarg. (gumbo limbo)                   | <i>Delonix regia</i> (Bojer ex Hook.) Raf. (royal poinciana)                                |
| <i>Carpinus caroliniana</i> Walt. (American hornbeam)              | <i>Diospyros virginiana</i> L. (common persimmon)                                           |
| <i>Carya</i> Nutt. (hickory)                                       |                                                                                             |
| <i>Carya aquatica</i> (Michx. f.) Nutt. (water hickory)            |                                                                                             |

## Appendix 1. Scientific and Common Names of Host Plants

|                                                                                                                |                                                                                     |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <i>Ebenopsis ebano</i> (Berl.) Barneby & Grimes<br>(Texas ebony)                                               | <i>Lithospermum caroliniense</i> (Walt. ex J. F. Gmel.)<br>MacM. (Carolina puccoon) |
| <i>Erigeron</i> L. (fleabane)                                                                                  | <i>Maclura pomifera</i> (Raf.) Schneid. (osage orange)                              |
| <i>Eupatorium</i> L. (thoroughwort)                                                                            | <i>Magnolia</i> L. (magnolia)                                                       |
| <i>Fagus</i> L. (beech)                                                                                        | <i>Malus</i> P. Mill. (apple)                                                       |
| <i>Fagus grandifolia</i> Ehrh. (American beech)                                                                | <i>Malus angustifolia</i> (Ait.) Michx. (southern<br>crabapple)                     |
| <i>Ficus</i> L. (fig)                                                                                          | <i>Mangifera indica</i> L. (mango)                                                  |
| <i>Ficus aurea</i> Nutt. (Florida strangler fig)                                                               | <i>Marshallia</i> Schreb. (Barbara's buttons)                                       |
| <i>Ficus citrifolia</i> P. Mill. (wild banyantree)                                                             | <i>Matelea</i> Aubl. (milkvine)                                                     |
| <i>Flaveria linearis</i> Lag. (narrowleaf yellowtops)                                                          | <i>Medicago</i> L. (alfalfa)                                                        |
| <i>Forestiera segregata</i> (Jacq.) Krug & Urban<br>(Florida swampprivet)                                      | <i>Melilotus</i> P. Mill. (sweetclover)                                             |
| <i>Fraxinus</i> L. (ash)                                                                                       | <i>Melothria</i> L. (melothria)                                                     |
| <i>Fraxinus americana</i> L. (white ash)                                                                       | <i>Menispermum</i> L. (moonseed)                                                    |
| <i>Fraxinus quadrangulata</i> Michx. (blue ash)                                                                | <i>Metopium toxiferum</i> (L.) Krug & Urban (Florida<br>poisontree)                 |
| <i>Gaillardia</i> Foug. (blanketflower)                                                                        | <i>Morus</i> L. (mulberry)                                                          |
| <i>Geranium maculatum</i> L. (spotted geranium)                                                                | <i>Musa</i> L. (banana)                                                             |
| <i>Gleditsia triacanthos</i> L. (honeylocust)                                                                  | <i>Nicotiana</i> L. (tobacco)                                                       |
| <i>Gossypium</i> L. (cotton)                                                                                   | <i>Nyssa</i> L. (tupelo)                                                            |
| <i>Gossypium thurberi</i> Todaro (Thurber's cotton)                                                            | <i>Nyssa aquatica</i> L. (water tupelo)                                             |
| <i>Grindelia</i> Willd. (gumweed)                                                                              | <i>Nyssa sylvatica</i> Marsh. (blackgum)                                            |
| <i>Guajacum officinale</i> L. (lignum-vitae)                                                                   | <i>Oenothera</i> L. (evening-primrose)                                              |
| <i>Gymnocladus dioica</i> (L.) K. Koch (Kentucky<br>coffeetree)                                                | <i>Opuntia</i> P. Mill. (pricklypear)                                               |
| <i>Helenium</i> L. (sneezeweed)                                                                                | <i>Ostrya virginiana</i> (P. Mill.) K. Koch<br>(hophornbeam)                        |
| <i>Helianthus</i> L. (sunflower)                                                                               | <i>Oxydendrum arboreum</i> (L.) DC. (sourwood)                                      |
| <i>Helianthus annuus</i> L. (common sunflower)                                                                 | <i>Oxypolis</i> Raf. (cowbane)                                                      |
| <i>Heliopsis helianthoides</i> (L.) Sweet var. <i>occidentalis</i> (T. R. Fisher) Steyermark (smooth<br>oxeye) | <i>Parkinsonia aculeata</i> L. (Jerusalem thorn)                                    |
| <i>Heracleum</i> L. (cowparsnip)                                                                               | <i>Parthenocissus quinquefolia</i> (L.) Planch.<br>(Virginia creeper)               |
| <i>Hevea</i> Aublet (hevea)                                                                                    | <i>Paspalum notatum</i> Flueggé (bahiagrass)                                        |
| <i>Hibiscus</i> L. (rosemallow)                                                                                | <i>Persea</i> P. Mill. (bay)                                                        |
| <i>Hydrangea arborescens</i> L. (wild hydrangea)                                                               | <i>Persea borbonia</i> L. Spreng. (redbay)                                          |
| <i>Hymenaea courbaril</i> L. (stinkingtoe)                                                                     | <i>Phlox</i> L. (phlox)                                                             |
| <i>Ilex</i> L. (holly)                                                                                         | <i>Phytolacca</i> L. (pokeweed)                                                     |
| <i>Ilex glabra</i> (L.) Gray (inkberry)                                                                        | <i>Picea</i> A. Dietr. (spruce)                                                     |
| <i>Ipomoea</i> L. (morning-glory)                                                                              | <i>Picea rubens</i> Sarg. (red spruce)                                              |
| <i>Jatropha</i> L. (nettlespurge)                                                                              | <i>Pimenta dioica</i> (L.) Merr. (allspice)                                         |
| <i>Juglans</i> L. (walnut)                                                                                     | <i>Pinus</i> L. (pine)                                                              |
| <i>Juglans cinerea</i> L. (butternut)                                                                          | <i>Pinus banksiana</i> Lamb. (jack pine)                                            |
| <i>Juglans nigra</i> L. (black walnut)                                                                         | <i>Pinus caribaea</i> Morelet (Caribbean pine)                                      |
| <i>Juniperus</i> L. (juniper)                                                                                  | <i>Pinus echinata</i> P. Mill. (shortleaf pine)                                     |
| <i>Juniperus ashei</i> Buchh. (Ashe's juniper)                                                                 | <i>Pinus rigida</i> P. Mill. (pitch pine)                                           |
| <i>Lantana</i> L. (lantana)                                                                                    | <i>Pinus sylvestris</i> L. (Scots pine)                                             |
| <i>Laguncularia racemosa</i> (L.) Gaertn. f. (white<br>mangrove)                                               | <i>Pinus taeda</i> L. (loblolly pine)                                               |
| <i>Larix</i> P. Mill. (larch)                                                                                  | <i>Pinus virginiana</i> P. Mill. (Virginia pine)                                    |
| <i>Lindera</i> Thunb. (spicebush)                                                                              | <i>Pinus strobus</i> L. (eastern white pine)                                        |
| <i>Liquidambar styraciflua</i> L. (sweetgum)                                                                   | <i>Piscidia</i> L. (piscidia)                                                       |
| <i>Liriodendron</i> L. (tuliptree)                                                                             | <i>Piscidia piscipula</i> (L.) Sarg. (Florida fishpoison<br>tree; Jamaica dogwood)  |
| <i>Lysiloma</i> Benth. (false tamarind)                                                                        | <i>Pithecellobium dulce</i> (Roxb.) Benth. (monkey-<br>pod)                         |
| <i>Lysiloma latisiliquum</i> (L.) Benth. (false tamarind)                                                      |                                                                                     |

## Appendix 1. Scientific and Common Names of Host Plants

|                                                                                   |                                                                           |
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| <i>Platanus occidentalis</i> L. (American sycamore)                               | <i>Sideroxylon lanuginosum</i> Michx. ssp. <i>lanuginosum</i> (gum bully) |
| <i>Platanus wrightii</i> S. Wats. (Arizona sycamore)                              | <i>Sideroxylon tenax</i> (L.) (tough bully)                               |
| <i>Populus</i> L. (cottonwood)                                                    | <i>Sinobambusa gibbosa</i> McClure (gibbous bamboo)                       |
| <i>Populus deltoides</i> Bartr. ex Marsh (eastern cottonwood)                     | <i>Smilacina racemosa</i> (false Solomon's seal)                          |
| <i>Populus tremuloides</i> Michx. (quaking aspen)                                 | <i>Smilax</i> L. (greenbrier)                                             |
| <i>Prosopis juliflora</i> (Sw.) DC. (mesquite)                                    | <i>Solanum</i> L. (nightshade)                                            |
| <i>Prunus</i> L. (plum)                                                           | <i>Solidago</i> L. (goldenrod)                                            |
| <i>Prunus persica</i> (L.) Batsch (peach)                                         | <i>Sorghastrum</i> Nash (Indiangrass)                                     |
| <i>Prunus serotina</i> Ehrh. (black cherry)                                       | <i>Spiraea</i> L. (spirea)                                                |
| <i>Pseudotsuga menziesii</i> (Mirbel) Franco (Douglas-fir)                        | <i>Spondias</i> L. (mombin)                                               |
| <i>Punica granatum</i> L. (pomegranate)                                           | <i>Spondias purpurea</i> L. (purple mombin)                               |
| <i>Pyrus</i> L. (pear)                                                            | <i>Sporobolus</i> R. Br. (dropseed)                                       |
| <i>Quercus</i> L. (oak)                                                           | <i>Swietenia</i> Jacq. (mahogany)                                         |
| <i>Quercus alba</i> L. (white oak)                                                | <i>Taxodium distichum</i> (L.) L. C. Rich. (bald cypress)                 |
| <i>Quercus bicolor</i> Willd. (swamp white oak)                                   | <i>Tectona</i> L. f. (tectona)                                            |
| <i>Quercus falcata</i> Michx. (southern red oak)                                  | <i>Thuja</i> L. (red cedar)                                               |
| <i>Quercus geminata</i> Small (sand live oak)                                     | <i>Thuja occidentalis</i> L. (arborvitae)                                 |
| <i>Quercus inopina</i> Ashe (sandhill oak)                                        | <i>Tilia</i> L. (basswood; linden)                                        |
| <i>Quercus laevis</i> Walt. (turkey oak)                                          | <i>Toxicodendron radicans</i> (L.) Kuntze (eastern poison ivy)            |
| <i>Quercus laurifolia</i> Michx. (laurel oak)                                     | <i>Tragopogon</i> L. (goatsbeard)                                         |
| <i>Quercus lyrata</i> Walt. (overcup oak)                                         | <i>Tsuga</i> Carr. (hemlock)                                              |
| <i>Quercus macrocarpa</i> Michx. (bur oak)                                        | <i>Ulmus</i> L. (elm)                                                     |
| <i>Quercus muhlenbergii</i> Engelm. (chinkapin oak)                               | <i>Ulmus alata</i> Michx. (winged elm)                                    |
| <i>Quercus nigra</i> L. (water oak)                                               | <i>Ulmus crassifolia</i> Nutt. (cedar elm)                                |
| <i>Quercus palustris</i> Muenchh. (pin oak)                                       | <i>Ulmus rubra</i> Muhl. (slippery elm)                                   |
| <i>Quercus phellos</i> L. (willow oak)                                            | <i>Vaccinium</i> L. (blueberry)                                           |
| <i>Quercus stellata</i> Wangenh. (post oak)                                       | <i>Vaccinium arboreum</i> Marsh. (farkleberry)                            |
| <i>Quercus vaseyana</i> Buckl. (sandpaper oak)                                    | <i>Vernonia</i> Schreb. (ironweed)                                        |
| <i>Quercus velutina</i> Lam. (black oak)                                          | <i>Viburnum</i> L. (viburnum)                                             |
| <i>Quercus virginiana</i> P. Mill. (live oak)                                     | <i>Vitis</i> L. (grape)                                                   |
| <i>Rhizophora mangle</i> L. (red mangrove)                                        | <i>Wisteria</i> Nutt. (wisteria)                                          |
| <i>Rhododendron</i> L. (rhododendron)                                             | <i>Xanthium</i> L. (cocklebur)                                            |
| <i>Rhus</i> L. (sumac)                                                            | <i>Ximenia americana</i> L. (tallow wood)                                 |
| <i>Rhus glabra</i> L. (smooth sumac)                                              | <i>Zanthoxylum fagara</i> (L.) Sarg. (lime pricklyash)                    |
| <i>Robinia</i> L. (locust)                                                        | <i>Zanthoxylum flavum</i> Vahl. (West Indian satinwood)                   |
| <i>Robinia pseudoacacia</i> L. (black locust)                                     | <i>Zea mays</i> L. (corn)                                                 |
| <i>Rosa</i> L. (rose)                                                             |                                                                           |
| <i>Rubus</i> L. (raspberry; blackberry)                                           |                                                                           |
| <i>Rudbeckia</i> L. (coneflower)                                                  |                                                                           |
| <i>Sabal palmetto</i> (Walt.) Lodd. ex J. A. & J. H. Schultes (cabbage palmetto)  |                                                                           |
| <i>Salix</i> L. (willow)                                                          |                                                                           |
| <i>Salix exigua</i> Nutt. (narrowleaf willow)                                     |                                                                           |
| <i>Salix nigra</i> Marsh. (black willow)                                          |                                                                           |
| <i>Sambucus nigra</i> L. ssp. <i>canadensis</i> (L.) R. Bolli (common elderberry) |                                                                           |
| <i>Sapindus saponaria</i> L. (soapberry)                                          |                                                                           |
| <i>Sassafras</i> Nees & Eberm. (sassafras)                                        |                                                                           |
| <i>Scalesia</i> Hooker (giant daisy tree)                                         |                                                                           |
| <i>Schinopsis balansae</i> Engler (quebracho)                                     |                                                                           |
| <i>Sideroxylon foetidissimum</i> Jacq. (false mastic)                             |                                                                           |





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(note: both publications sold as a set, in a shelf box. (see photo). Price: \$125.00 includes shipping in the US. Add shipping for Canada & Mexico (\$16.00); overseas surface mail, \$23.00 (for airmail rate, contact Treasurer). Instructions for purchase of available volumes are listed below and on the Society website at: <<http://www.coleopsoc.org>>.

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